NMCLE EASY ENTRY

for Nepal Medical Council Licensing Examinations

The most updated and adequate content with recent NMCLE questions pattern

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Preface

We share immense happiness and pleasure to introduce"NMCLE Easy Entry", the most complete book for NMCLE.Yes, 'the most complete book', this is what our review team has discovered. We came finally with this endeavor, after a long journey of tireless devotion. Something counts more significant even in crowd if it makes its own way of typical presence with a different approach; this is what we have tried with the most desirable presentation in this title. We felt an essence of completeness of preparation title during our hard time of NMCLE preparation. We are hopeful that these works would be noteworthy for medical career aspirants who commit to stand firmly for medical professional. It was envisioned to craft a book aiming to fulfill systematic coverage of subjects and topics, exactly the same we have done! We transformed the thirst driven energy into this book which we assure, would be more crucial for in-depth preparation for Medial Licensing Exam preparation. And at this point, we reassure that this work is not adding up one more title but something to aid for a medical student/ intern for their intended subject wise review and preparation for licensing examination of Nepal Medical Council. We have not just piled up the needful notes and multiple choice question with their explanations but also attempted to organize them carefully into systems /topics, so as to make the preparation easy, effective and enough. We also would like to mention something strongly that one who has gone through this piece of work, will surely like to review it even after passing NMCLE questions for quality and quantity of compiled knowledge in here.

We feel the inclusion of these highlights makes it a needful for every reader.

- Subject-wise revision notes for all the subjects (providing a zest, just enough to review all the subject matters) with mirco-heading breakdown and sequential flow of the subject matter.
- Past questions of 2065-2068 (with explanations wherever needed) in each subject just after the review notes for the idea of quality and depth of questions asked in NMCLE previously.
- Topic-wise probable questions as per coverage and depth of present NMCLE papers.
- Probable questions are provided with explanatory notes to prove appropriateness of choice & relevant information and flow charts, tables &diagrams where needed
- Topic-wise probable questions are followed by a bag of mix questions, case based questions (Miscellaneous questions) in each subject just to boost your knowledge and confidence regarding that particular subject.
- Inclusion of ample number of comprehensive structured questions (CSQs) as per the examination patterns in six subjects.
- The most recent NMCLE papers (2069-2074) with complete number of questions (memory-based assembled NMCLE papers from different group of examinees)are provided with sufficient explanation and reference (for the most debated and controversial questions).
- Answers of the MCQs and CSQs are not expressed as 'a' or 'b' or 'c' or 'd', rather the full text of the correct option has been enlisted to squeeze any probability of technical and printing errors.
- Edited and reviewed by different teams of scholars and medical officers making it error free at the utmost level.

We have also attempted to put the order of questions in logical and conceptual coherence. Of course we appreciate valuable comments from every reader to make it more trustworthy and better in next version. We have made the best level of effort to make every portion of the book with an error free content. This work has been done through various level proof reading and readers review activities during the course of making this book. Moreover we heartily expect further improvement from reader's side.

Thanking you all
All the best

Authors

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LICENSE EXAMINATION QUESTION PATTERN

MBBS

MCQS 1 MARK EACH

Subject	No. of questions
Anatomy	5
Physiology	5
Pharmacology	4
Biochemistry	5
Pathology	7
Microbiology	4
Forensic medicine	6
Community Med	13
Medicine	14
Surgery	13
Gynecology and Obstetrics	13
Pediatrics	10
Anesthesia	8
Orthopedics	6
Ophthalmology	6
ENT	6
Dermatology	3
Psychiatry.	2
Total	**130**

CSQS 5 MARKS EACH

Subject	No. of questions
Pharmacology	1
Medicine	2
Surgery	2
Gynecology and Obstetrics	2
Pediatrics	2
Orthopedics	1
Total	**10**

**Please note that the information provided over here is to give a hint to the students appearing licensing examination and does not mean exact distribution in each examination.*

BDS

MCQS 1 MARK EACH

Subject	No. of questions
Oral surgery	20
Prosthodontics	20
Conservative dentistry	20
Orthodontics	10
Pedodontics	10
Periodontics	10
Oral medicine	10
Oral pathology	10
Community dentistry	10
Medicine	5
Surgery	5
Total	**130**

CSQS 5 MARKS EACH

Subject	No. of questions
Oral surgery	2
Prosthodontics	2
Conservative dentistry	2
Orthodontics	1
Pedodontics	1
Periodontics	1
Oral medicine	1
Total	**10**

SPECIAL EXAMINATION

Special Examination

Aims and objective

- MCQs for the range of knowledge
- CSQs for the depth of knowledge

Subject	No. of questions
Basic medicine/science	30%
Principle and practice	45%
Super specialty and recent advances	25%

Marks distribution

MCQs	60%
CSQs	40%

Source: nmc.org.np

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PAST QUESTIONS

NMCLE - MANGSIR 2069

Anatomy

1. What is the arrangement of artery, vein and nerve in the femoral canal?

a. Vein, artery and nerve lateral to medial
b. Vein, artery and nerve medial to lateral
c. Vein, nerve and artery lateral to medial
d. Vein, nerve and artery medial to lateral

☞ *Vein, artery, nerve medial to lateral is the arrangement in femoral canal.*

2. The major flexor muscle of hip is:

a. Iliopsoas
b. Pectineus
c. Quadriceps femoris
d. Gluteus major

☞ *Iliopsoas is the major flexor of hip.*

Physiology

3. What is the volume of air measured by spirometry in physiological practical while you deeply inspire and expire?

a. Tidal volume
b. Vital capacity
c. Residual volume
d. Total lung capacity

☞ *Tidal volume: amount of air inspired/expired in normal breathe.*
☞ *Vital capacity: Amount of air after full inspiration and then expiration.*
☞ *Residual volume: amount of air left in lungs after normal expiration.*
☞ *Total lung capacity: vital capacity + functional reserve volume*

4. Which organ has the highest blood flow/gram of tissue?

a. Kidney b. Heart
c. Brain d. Liver

☞ *Kidney has the highest blood flow per gram of tissue.*

5. Which of the following hormone is responsible for milk production?

a. Prolactin b. Oxytocin
c. Somatostatin d. Estrogen

6. In which of the following hematological disorder bleeding time is prolonged?

a. VWD
b. Chronic liver disease
c. ITP
d. Hemophilia

☞ *Bleeding time is affected by platelet function, platelet aggregation defect and certain blood vessel defects but not by other coagulation factors such as hemophilia. Diseases that cause prolonged bleeding time include thrombocytopenia, disseminated intravascular coagulation (DIC), Bernard-Soulier disease, and Glanzmann's thrombasthenia.*
☞ *Aspirin and other cyclooxygenase inhibitors can prolong bleeding time significantly. While warfarin and heparin have their major effects on coagulation factors, an increased bleeding time is sometimes seen with use of these medications as well.*
☞ *People with Von-Willebrand disease usually experience increased bleeding time, as von Willebrand factor is a platelet adhesion protein, but this is not considered an effective diagnostic test for this condition.*
☞ *It is also prolonged in hypofibrinogenemia.*
☞ *Hemophilia is characterized by prolonged PTT, low factor VIII/IX coagulant level and normal levels of VWF.*
☞ *Chronic liver diseases are characterized by prolonged PT and PTT (especially PT).*

7. Which of the following is not a route of insensible loss of fluid:

a. Sweating b. Perspiration
c. Urination d. Defecation

8. Conducting system of heart is derived from?

a. Myocardium
b. Endocardium
c. Pericardium
d. Nerve cell dervatives

9. The minimal urinary output per day for normal individual is:

a. 100 ml b. 200 ml
c. 300 ml d. 500 ml

PART-19

1.b.	Vein, artery	2.a.	Iliopsoas	3.b.	Vital capacity
4.a.	Kidney	5.a.	Prolactin	6.c.	ITP
7.c.	Urination	8.a.	Myocardium	9.c.	300 ml

☞ *Also the normal urine output in children is 1 ml/kg/hr and that of adult is 0.5-1 ml/kg/hr. Taking the lower limit for a normal individual weighing 70 kg, normal urine output is around 840 ml and that of for 60 kg is 720 ml. The normal range for an adult urinary output is between 800 to 2,000 mL of urine daily - with a normal fluid intake of about 2 liters per day. Values for normal urinary output may vary slightly between laboratories. A urine output of 500 mL per day is generally considered adequate for normal function.*

Pathology

10. Negri bodies are diagnostic finding in:

a. AIDS b. Rabies
c. Herpes infection d. Encephalitis

*Negri bodies are eosinophilic cytoplasmic inclusion bodies found in brain neurons. They are seen in **purkinje cells of cerebellum and in pyramidal cells in hippocampus**. Less commonly they can be seen in cortical neurons and in brain stem.*

11. The commonest age group for acute rheumatic fever is:

a. 10- 30 years b. 5-15 years
c. < 5 years d. > 15 years

12. Minimal amount of GI bleeding to cause malena is:

a. 10 ml b. 40 ml
c. 60 ml d. 100 ml

Pharmacology

13. What is the most common complication of ACE inhibitor?

a. Postural hypotention
b. Nausea
c. Vomiting
d. Dry cough

☞ *Dry cough is due to accumulation of bradykinin in lungs after the use of ACE inhibitors.*

14. All of the following are side effects of steroid therapy EXCEPT:

a. Moon facies b. Striae
c. Hypertension d. Hypoglycemia

☞ *Steroid therapy cause hyperglycemia and not hypoglycemia.*

Biochemistry

15. Which of the following cardiac markers is the earliest to rise in acute MI?

a. CPK-MB b. Troponin I
c. LDH d. CPK-MM

16. What is the content of 5%dextrose?

a. Glucose b. Dextran
c. Dextrin d. Galactose

17. Daily requirement of sodium is:

a. 50 mmol/day b. 50-150 mmol/day
c. 200 mmol/day d. 250 mmol/day

Microbiology

18. What is the most common causative organism in hospital acquired infections?

a. Gram + ve bacilli b. Gram -ve bacilli
c. anaerobes d. Atypical bacteria

19. Marker of transmission in hepatitis B infection is:

a. HBsAg b. HBeAg
c. Anti HBsAg d. HBcAg

☞ *HbsAg signifies active infection with hepatitis B.*
☞ *HbeAg signifies infectivity in a patient with hepatitis B.*

***Note:** go through the notes of Review notes for hepatitis on microbiology section.*

20. Cysticercosis in brain is caused by:

a. Schistosoma mansoni
b. Echinococcus
c. Taenia solium
d. Taenia saginata

21. Malarial relapse is due to:

a. Trophozoites b. Hypnozoites
c. Merozoites d. Sporozoites

22. Most common cause of osteomyelitis in children is:

a. Streptococcus pyogenes
b. Staphylococcus aureus
c. Tuberculosis
d. Salmonella

Osteomyelitis (or OM) is infection and inflammation of the bone and bone marrow.

Community medicine

23. Sensitivity is the ability of a test to detect:

a. False negative b. False positive
c. True negative d. True positive

ANSWERS

1.b.	Vein, artery	2.a.	Iliopsoas	3.b.	Vital capacity
4.a.	Kidney	5.a.	Prolactin	6.c.	ITP
7.c.	Urination	8.a.	Myocardium	9.c.	300 ml
10.b.	Rabies	11.b.	5-15 years	12.c.	60 ml
13.d.	Dry cough	14.d.	Hypoglycemia	15.b.	Troponin I

16.a.	Glucose	17.b.	50-150 mmol/day	18.b.	Gram -ve bacilli
19.b.	HBeAg	20.c.	Taeniasolium	21.b.	Hypnozoites
22.b.	Staphylococcus aureus	23.d.	True positive	24.d.	Both A and B

24. The mode of transmission in polio is:

a. Droplet infection b. Feco-oral route
c. Blood borne d. Both A and B

25. Deficiency of vitamin C leads to:

a. Acrodermatitis enteropathica
b. Beriberi
c. Scurvy
d. Neuropathy

- *Acrodermatitis enteropathica: Zinc deficiency.*
- *BeriBeri: Vitamin B1 deficiency.*
- *Scurvy: Vitamin C deficiency.*
- *Neuropathy: Has multiple causations.*

26. The immunity due to mothers milk is :

a. Natural and active
b. Natural and passive
c. Acquired and active
d. Acquired and passive

- *Mother's milk transfers antibodies and not antigens. It is a natural process. Thus immunity transferred is natural and passive.*

27. In which of the following human are the incidental host?

a. Malaria b. Hookworm
c. Kala-azar d. Typhoid

- *Leishmaniasis infections are considered zoonotic diseases, because for most species of Leishmania, an animal reservoir is required for endemic conditions to persist. Humans are generally considered incidental hosts. Infections in wild animals are usually not pathogenic, with the exception of dogs, which may be severely affected.*
- *A dead-end host or incidental host is an intermediate host that generally does not allow transmission to the definitive host, thereby preventing the parasite from completing its development. For example, humans are dead-end hosts for Echinococcus canine tapeworms. As infected humans are not usually eaten by dogs, foxes etc., the immature Echinococcus - although it causes serious disease in the dead-end host - is unable to infect the primary host and mature.*

28. The incubation period of syphilis is:

a. 9-19 days b. 9-90 days
c. 9 months d. 90-100 days

29. What is the schedule of antirabies vaccination (in days) for post exposure treatment of person who has been vaccinated for rabies previously with HDC vaccine?

a. 0, 3, 7 b. 0, 3, 7, 14 and 90
c. 0, 3, 7, 28 d. 0, 3, 14

Type of Prophylaxis Schedule

- *Pre-exposure: Days 0, 7, 28*
- *Post-exposure in previously vaccinated*
  - *a. Severe bite/ unknown antibody titre: Days 0, 3, 7*
  - *b. Non-severe bite/ antibody titre> 0.5 IU/ml:Days 0, 3*

Post-exposure in non-vaccinated

i. Essen regimen: the 5 dose regimen prescribes 1 dose on each days 0, 3, 7, 14, and 28

ii. Zareb regimen: the 4 dose abbreviated multisite regimen prescribes 2 doses on day 0 (1 in each of the 2 deltoid or thigh sites) followed by 1 dose on each of days 7 and 21

30. HIV transmission from mother to baby in south east Asia is:

a. 30% b. 20%
c. 40% d. 50%

- *Majority of those transmission are due to breastfeeding than due to vertical transmission.*

ANSWERS

16.a. Glucose	17.b. 50-150 mmol/day	18.b. Gram -ve bacilli
19.b. HBeAg	20.c. Taeniasolium	21.b. Hypnozoites
22.b. Staphylococcus aureus	23.d. True positive	24.d. Both A and B
25.c. Scurvy	26.b. Natural and passive	27.c. Kala-azar
28.b. 9-90 days	29.a. 0, 3, 7	30.d. 50%

31. Which of the following study is done for rare disease?

a. Cohort study
b. Case control study
c. Randomized control study
d. None of the above

32. Dispersion is measured by:

a. Mean
b. Median
c. Standard deviation
d. Mode

The examples of measures of dispersion (variability) include:

- *Standard deviation*
- *Interquartile range (IQR)*

PART-19

31.b. Case control study 32.c. Standard deviation

- *Range*
- *Mean absolute difference (also known as Gini mean absolute difference)*
- *Median absolute deviation (MAD)*
- *Average absolute deviation (or simply called average deviation)*
- *Coefficient of variation*

Standard deviation is the most common and generally most appropriate measure of dispersion/ variability.

33. Which among the following is the best method for controlling leprosy?

a. Vaccination b. Health education
c. Chemoprophylaxis d. Health hygiene

34. Average life expectancy (in years) of Nepalese population is:

a. 60 b. 64
c. 66 d. 68

- *According to the latest WHO data published in 2015 life expectancy in Nepal is: Male 67.7, female 70.8 and total life expectancy is 69.2 which gives Nepal a World Life Expectancy ranking of 116.*

35. Which of the following is the characteristics finding of positive tuberculin test:

a. Vasculitis b. Induration
c. Necrosis d. Erythema

Forensic medicine

36. What is the minimum age for giving consent for any examination, according to law of Nepal?

a. 16 b. 18
c. 14 d. 24

37. Which of the following is the most important identification system?

a. Dactylography b. Photography
c. Scars d. Anthropometry

38. The moral principles which should guide members of medical profession in their dealings with each other, their patients and the state is:

a. Medical etiquette
b. Medical ethics
c. Medical jurisprudence
d. Legal medicine

39. Killing of someone by applying pressure on chest is known as:

a. Mechanical Asphyxiation
b. Burking
c. Strangulation
d. Smothering

Note: see the notes of asphyxia on review notes of Forensic medicine

40. The toxin produced by cobra is:

a. Hematotoxic b. Neurotoxic
c. Myotoxic d. Cardiotoxic

Internal medicine

41. In a patient of MI the mortality is highest within...

a. 1hr b. 6hrs
c. 12hrs d. 1 day

42. A 40 year old farmer presents in emergency department with history of altered sensorium, salivation, diarrhea and urinary incontinence. His heat rate was 60/min, and pupil was pinpointed. The likely diagnosis is:

a. Lead poisoning
b. Arsenic poisoning
c. Organophosphate poisoning
d. Atropine poisoning

43. Generalized lymphadenopathy is present in all of the following except:

a. TB b. Lymphoma
c. Malaria d. CLL

44. A person has cough with greenish sputum. The likely organism involved is....

a. Pseudomonas b. S. aureus
c. H. influenza d. Klebsiella

Type / Color of sputum	Cause
Mucoid sputum	Chronic bronchitis / COPD in absence of active infection
Serous (Clear and watery or pink and frothy)	Acute pulmonary edema and alveolar cell cancer
Yellow	LRTI (due to live neutrophils) and in asthma (live eosinophils)
Green	Chronic infection in COPD or bronchiectasis (due to dead neutrophils), **Pseudomonas infection**

33.b. Health education		
34.d. 68	35.b. Induration	36.a. 16
37.a. Dactylography	38.b. Medical ethics	39.a. Mechanical Asphyxiation
40.b. Neurotoxic	41.a. 1hr	42.c. Organophosphate poisoning
43.c. Malaria	44.a. Pseudomonas	45.b. Herpes simplex ...

Chronic lymphocytic leukemia

- Rusty sputum = Pneumococcus infection
- Chocalate coloured sputum = Klebsiella infection
- Purulent sputum becomes red because of lysed neutrophils which release the green-pigmented enzyme, verdoperoxidase.
- In early pneumococcal pneumonia, sputum becomes rusty red color as pneumonic inflammation causes lysis of red cells.

45. A 28 years old male patient presents with convulsion and altered sensorium. His CT scan of head shows bilateral temporal hypodense lesions. The diagnosis is :

a. Hemorrhagic stroke
b. Herpes simplex encephalitis
c. S. aureus meningitis
d. Embolic stroke

ANSWERS

31.b.	Case control study	32.c.	Standard deviation	33.b.	Health education
34.d.	68	35.b.	Induration	36.a.	16
37.a.	Dactylography	38.b.	Medical ethics	39.a.	Mechanical Asphyxiation
40.b.	Neurotoxic	41.a.	1hr	42.c.	Organophosphate poisoning
43.c.	Malaria	44.a.	Pseudomonas	45.b.	Herpes simplex ...

46. Which of the following enzyme is raised in pancreatitis?

a. Tyrosinase b. Amylase
c. HCl d. Galactase

Amylase levels are raised in many other conditions too. Serum lipase is more suggestive for pancreatitis.

47. A patient comes in emergency department with anaphylaxis. What is the drug of choice for this patient?

a. Chlorpheniramine b. Adrenaline
c. Atropine d. Prednisolone

48. All of the following are the causes of microcytic hypochromic anemia EXCEPT:

a. Iron deficiency anemia
b. Thalessernia
c. Sideroblastic anaemia
d. Sickle cell anaemia

49. Which of the following is not helpful in diagnosis of diabetes mellitus:

a. Blood sugar b. OGT test
c. Urine sugar d. HbA1c

50. Which of the following is true regarding full blown AIDS?

a. Low viral titer and low CD4 counts
b. High viral titer and high CD4 counts
c. High viral titer and low CD4 counts
d. Low viral titer and high CD4 counts

51. Which of the following is not a major criteria for rheumatic fever?

a. Chorea
b. Carditis
c. Fever
d. Subcutaneous nodules

Major criteria are:
- *Polyarthritis* 2
- *Carditis* 1
- *Chorea* 5
- *Erythema marginatum* 4
- *Subcutaneous nodules* 3

Case C

52. Which of the following is not a cause of flapping tremor?

a. Hepatic coma b. renal failure
c. Parkinsonism d. CO, narcosis

Parkinsonism causes, resting tremors of low frequency (3- 5) hertz.

53. If Broca's area in the cerebrum is paralyed what is the presentation?

a. Motor aphasia b. Sensory aphasia
c. Facial palsy d. Loss of vision

54. The characteristic gait in parkinsonism is:

a. Ataxic gait b. Festinating gait
c. High stepping gait d. Hemiplegic gait

55. Commonest valve involved in Rheumatic heart disease is:

a. Mitral b. Tricuspid
c. Aortic d. Pulmonary

56. A patient who was initially smear positive and remained positive even a 5 months of treatment is termed as:

a. Relapse b. Treatment failure
c. Defaulter d. Normal

Surgery

57. What is the most common organism to cause cholecystitis in cholelithiasis?

a. E. coli b. Streptococcus
c. Klebsiella d. Psedomonas

PART-19

46.b.	Amylase	47.b.	Adrenaline	48.d.	Sickle cell anaemia
49.c.	Urine sugar	50.c.	High viral titer ...	51.c.	Fever

52.c.	Parkinsonism	53.a.	Motor aphasia	54.b.	Festinating gait
55.a.	Mitral	56.b.	Treatment failure	57.a.	E. coli

58. All of the following statements are true regarding Meckel's diverticulum, EXCEPT:

a. It arises from mesenteric border
b. It is 2 inches long
c. It is 2 feet away from the ileocecal junction
d. It contains all the layers of small intestine

☞ *Meckel's diverticulum arises from anti mesenteric border.*

59. The earliest sign of DVT is:

a. Tender calf
b. Increased temperature
c. Swelling
d. Hoffman's sign

60. A 19 year old girl comes in emergency department with history of severe pain in the right iliac region which was initially in the periumblical region. On examination there was tenderness and rebound tenderness over the site of pain. The most likely diagnosis is:

a. Acute appendicitis
b. Right ureteric colic
c. Mittleschmertz pain
d. acute pancreatitis

☞ *The shifting pain as in above condition is very suggestive of acute appendicitis. Initially as only visceral peritoneum is involved pain is referred to periumbilical area a/c to dermatome rule* ***(visceral pain)****. As disease progresses parietal peritoneum is also involved and pain is localized to right iliac fossa* ***(somatic pain).***

ANSWERS

46.b. Amylase	47.b. Adrenaline	48.d. Sickle cell anaemia
49.c. Urine sugar	50.c. High viral titer ...	51.c. Fever
52.c. Parkinsonism	53.a. Motor aphasia	54.b. Festinating gait
55.a. Mitral	56.b. Treatment failure	57.a. E. coli
58.a. It arises from mesenteric ..	59.a. Tender calf	60.a. Acute appendicitis

61. The fluid that is contraindicated in head injury is:

a. Ringer lactate
b. 5% Dextrose
c. Normal saline
d. DNS

☞ ***Dextrose is contraindicated*** *because sugar moiety from fluid diffuses to brain substance. It then, osmotically drives water from intravascular volume to extravascular region and* ***aggravates the edema of brain and thus raises the intra cranial pressure.***

62. Which one of the following is not a differential diagnosis of epigastric pain?

a. Peptic ulcer
b. Myocardial infarction
c. Duodenal perforation
d. Ureteric colic

63. A patient of RTA comes in emergency who can open eyes on pain, extends limb on pain and produces incomprehensible sounds. What is his GCS?

a. 3
b. 4
c. 5
d. 6

64. Pheochromocytoma can be associated with:

a. Medullary carcinoma of thyroid
b. Renal cell carcinoma
c. Gastric cancer
d. Pancreatic cancer

☞ *These two occur together as a part of* ***multiple endocrine neoplasia (MEN) syndrome, type 2.*** *This syndrome includes: medullary thyroid carcinoma (MTC), primary hyperparathyroidism and Pheochromocytoma. MTC combined with pheochromocytoma alone is called* ***Sipple's syndrome.***

☞ *Multiple endocrine neoplasia type 1 includes: primary hyperparathyroidism, pancreatic endocrine tumors, and tumors of pituitary gland (prolactinoma).*

65. If an inguinal hernia contains a part of intestine in it, it is termed as:

a. Strangulated hernia
b. Richter's hernia
c. Littre's hernia
d. Intestinal hernia

☞ *Richter's hernia: contains a portion of circumference of intestine.*

☞ *Littre's hernia: contains Meckel's diverticulum.*

66. Which of the following factors is less reliable regarding severity of burn?

a. Depth of burn
b. Formation of blister
c. Temperature
d. Percentage of burn

61.b. 5% Dextrose	62.d. Ureteric colic	63.d. 6
64.a. Medullary carcinoma ...	65.b. Richter's hernia	66.c. Temperature

67. **A 50 year old male patient comes in emergency department with the history of epigastric pain and vomiting for 3 days. On enquiry he reveals he is chronic alcoholic. His serum amylase is raised. The likely diagnosis is:**
   a. Acute pancreatitis
   b. Acid peptic disease
   c. Acute cholecystitis
   d. Acute appendicitis

68. **Which of the following is drained by Hilton's method:**
   a. Cold abscess b. Furuncle
   c. Breast abscess d. Abscess on trunk

Hilton's method:
- *Abscess is incised at the point of maximum bulge*
- *Sinus forceps inserted to break the loculi*
- *Abscess drained and cavity packed*

69. **A 27 year old female presented with small nodule in outer quadrant of breast which is non tender and slips on palpation. The most likely diagnosis is:**
   a. Fibroadenoma b. Fibrocystic changes
   c. Breast carcinoma d. Breast abscess

70. **Bleeding from the site of operation after 6 hours of operation is called as:**
   a. Primary bleeding
   b. Reactionary bleeding
   c. Secondary bleeding
   d. Active bleeding

- ***Primary bleeding**: bleeding at the time of surgery that occurs due to inflicting trauma eg. Improper surgical technique, inappropriate first aid measures*
- ***Reactionary bleeding**: bleeding that occurs within 24 hours due to dislodgement of clot at wound by coughing, straining, rise of blood pressure etc.*
- ***Secondary bleeding**: occurs after variable time period, usually (7-14) days, due to sloughing of the all of vessel. It is precipitated by factors such as infection, pressure necrosis, malignancy or drains.*

71. **Healing of incised wound after caesarean section is by:**
   a. Primary intention
   b. Secondary intention
   c. Scar formation
   d. All of the above

Wound healing are of three types:
- *Primary intention: healing of wound with opposed edges. Eg. Surgically incised wounds. There is more epithelial regeneration than fibrosis.*
- *Secondary intention: wounds with extensive soft tissue loss. Eg. Major trauma, deep burns etc.*
- *Delayed primary intention: infected wounds; Wounds are initially left open, sutured after infection has resolved.*

72. **A 36 year old male, a victim of RTA comes to emergency department. Immediately CT scan was done which shows blood beneath the dura mater. The most likely diagnosis is:**
   a. Subarachnoid hemorrhage
   b. Subdural hematoma
   c. Intracranial hemorrhage
   d. Epidural hematoma

73. **A 45 years and 75 kg male comes with burn injury over his body involving 40% of his body. What is the amount of fluid to be given in 24 hours?**
   a. 6 lts b. 10 lts
   c. 12 lts d. 15 lts

- *Fluid required = (4ml × % of burn × body weight)*
- *For burn > 50 % of BSA, BSA is taken 50% only.*

Pediatrics

74. **What is the protocol of steroid therapy in nephrotic syndrome?**
   a. 60mg/m²/day for 4 weeks, 60 mg/ m²/day for next 6 weeks
   b. 60mg/m²/day for 4 weeks, 40 mg/ m²/day for next 6 weeks
   c. 60mg/m²/day for 6 weeks, 60 mg/ m²/day for next 6 weeks
   d. 60mg/m²/day for 6 weeks, 40 mg/ m²/day for next 4 weeks

75. **The most common causative organism of dairrhoea in infants is:**
   a. Salmonella b. E. coli
   c. Rota virus d. Cholera

ANSWERS

61.b. 5% Dextrose	62.d. Ureteric colic	63.d. 6
64.a. Medullary carcinoma ...	65.b. Richter's hernia	66.c. Temperature
67.a. Acute pancreatitis	68.c. Breast abscess	69.a. Fibroadenoma
70.b. Reactionary bleeding	71.a. Primary intention	72.b. Subdural hematoma
73.c. 12 lts	74.b. 60mg/m²/day for 4 weeks...	75.c. Rota virus

76. A young male patient complains of neuropsychiatric symptoms and has similar history with his brother. The most likely diagnosis is:

a. Parkinson's disease
b. Hutchinson's disease
c. Wilson's disease
d. Rheumatic fever

☞ *Neuro psychiatric symptoms in Wilson's disease are due to damage to basal ganglia and occasionally pons, medulla, thalamus, cerebellum and subcortical areas. The three main movement disorders are:* ***dystonia, incoordination and tremors. Sensory abnormalities and muscular weakness are not the features of this disease.***

77. An infant turns blue while crying and reliefs after sitting in squatting position. The most probable diagnosis is:

a. Childhood asthma
b. Patent ductus arteriosus
c. Ventricular septal defect
d. Tetralogy of fallot

78. The most common causative organism to cause bronchiolitis in children is:

a. Respiratory syncytial virus
b. H. influenza
c. S. pneumonia
d. Parainfluenza virus

79. Double bubble sign in USG is sign of:

a. Anencephaly
b. Esophageal atresia
c. Duodenal atresia
d. Posterior urethral valve

80. Turners syndrome

a. 45X0 b. 45XX
c. 46XXY d. 46XXX

☞ *Turner's syndrome is the only monosomy compatible with life.*

81. A term baby develops jaundice on 3rd day of birth upto umbilicus with normal stool and urine. Mother's blood group is O+ve and that of the baby is A-ve. What is the most probable cause for the jaundice in this baby:

a. Rh incompatibility
b. G6PD deficiency
c. Breast milk jaundice
d. Neonatal sepsis

82. Most common congenital heart disease (CHD) is:

a. ASD b. VSD
c. PDA d. TOF

83. A 10 year old child presented with fever and rashes over both lower limb, Neck rigidity was present. What is the most likely diagnosis?

a. Meningococcal meningitis
b. Tubercular meningitis
c. HSP
d. ITP

Gynecology and obstetrics

84. A 30 years woman complains of vaginal discharge, itching and cherry red vagina. What is the most probable organism involved?

a. Candida b. Trichomonas
c. Gardnerella d. Chlamydia

85. Contraceptive of choice in newly married couple is:

a. OCP b. Barrier method
c. Depot injection d. Copper T

86. The major cause of postpartum bleeding is:

a. Relaxation of uterus
b. Retained placenta
c. Gestational hypertension
d. Inversion of uterus

☞ *Post-partum atony of the uterus is the commonest cause (about* ***80% cases****)*

87. A 27 year old female G_2P_2, with twin pregnancy has vaginal delivery of the first baby. What would be appropriate mode of delivery for the next transversely lying baby?

a. External cephalic version
b. Caesarean section
c. Forceps delivery
d. Vacuum delivery

88. Which of the following type of placenta previa is said to be dangerous type?

a. Type I b. Type II posterior
c. Type II anterior d. Type III

89. Oxytocin is given in third stage of labour in:

a. IM b. Oral
c. Drip d. IV

76.c. Wilson's disease	77.d. Tetralogy of fallot	78.a. Respiratory syncytial virus
79.c. Duodenal atresia	80.a. 45X0	81.c. Breast milk jaundice

82.b. VSD	83.a. Meningococcal meningitis	84.b. Trichomonas
85.a. OCP	86.a. Relaxation of uterus	87.a. External cephalic version
	88.b. Type II posterior	89.a. IM

90. A 15 year old girl complains of cyclical lower abdominal pain. On examination she has bulging perineum. What is the most likely diagnosis?
a. Fibroid uterus b. Hematocolpus
c. Uterine anomalies d. Pregnancy

ANSWERS

76.c. Wilson's disease	77.d. Tetralogy of fallot	78.a. Respiratory syncytial virus
79.c. Duodenal atresia	80.a. 45X0	81.c. Breast milk jaundice
82.b. VSD	83.a. Meningococcal meningitis	84.b. Trichomonas
85.a. OCP	86.a. Relaxation of uterus	87.a. External cephalic version
88.b. Type II posterior	89.a. IM	90.b. Hematocolpus

91. Drug of choice for fits in pregnancy is
a. Valporate b. Diazepam
c. Carbamezepine d. $MgSO_4$

92. A 40 year old woman comes in gynecology OPD with history of post coital pain and bleeding. P/S examination reveals mass in the cervix. What will be your next step for the management of this case?
a. Send Pap smear
b. Biopsy of the mass
c. Treat with antibiotics first
d. Send routine investigations

93. Which of the following is the cause of unicornuate uterus:
a. Mullerian agenesis b.Wolfian duct agenesis
c. Mullerian dysgenesis d.None of the above

94. Hyperemesis gravidarum is common with all of the following EXCEPT:
a. H. mole b. Twin pregnancy
c. Primigravida d. Eclampsia

95. The commonest site for ectopic pregnancy is:
a. Ovary b. Ampulla
c. Isthmus d. Fimbriae

96. During the PV examination the structure palpable in the anterior wall of vagina is:
a. Ureter b. Urethra
c. Base of bladder d. Fallopian tube

97. Specimen for Pap smear is taken from:
a. Anterior fornix b. Posterior fornix
c. Lateral fornix d. Endometrium

98. β-hCG is measured in:
a. Mid stream urine
b. Urine from suprapubic pucture
c. Morning urine
d. Blood

99. The most likely vaginal infection in a woman taking OCP is due to:
a. Trichomonas b. Candida
c. Chlamydia d. Gonorrhea

100. The most common carcinoma in female in context of Nepal is:
a. Endometrial Ca b. Breast Ca
c. Ovarian Ca d. Cervical Ca

Orthopedics

101. Wrist drop is seen in which of the nerve palsy?
a. Ulnar nerve
b. Radial nerve
c. Axillary nerve
d. Common peroneal nerve

- *Ulnar nerve injury: Claw hand*
- *Radial nerve injury: Wrist drop*
- *Axillary nerve injury: Atrophy of deltoid, Regiment badge anesthesia*
- *Common peroneal nerve injury: Foot drop*

102. A person tries to clasp his hand, his index finger remains into extension. Which nerve is involved?
a. Median nerve b. Radial nerve
c. Axillary nerve d. Ulnar nerve

- *This is pointing index deformity, a feature of median nerve injury.*

103. A neonate is examined following breech delivery one arm is paralyzed, adducted and internally rotated at the shoulder and the forearm is pronated. What is the diagnosis?
a. Bell's palsy
b. Erbs palsy
c. Klumpke's palsy
d. Pseudobulbar palsy

- *Erb's palsy occurs due to involvement of nerve roots C5, C6.*

PART-19

91.d. $MgSO_4$	92.b. Biopsy of the mass	93.c. Mullerian dysgenesis
94.d. Eclampsia	95.b. Ampulla	96.b. Urethra
		103.b. Erbs palsy

97.c. Lateral fornix	98.c. Morning urine	99.b. Candida
100.d. Cervical Ca	101.b. Radial nerve	102.a. Median nerve

104. A 30 years old patient gives the history of fall from height. His x-ray report of the left ankle shows Calcaneum fracture. What is the next x-ray you would like to do in this case?
a. Chest x-ray b. X-ray of Spine
c. X-ray of pelvis d. X-ray of thigh

☞ *Calcaneum fractures occur when person falls from height and rests on feet, **transmitting force through axial skeleton**. Thus there are chances of fracture of the vertebrae.*

105. A patient presents with back pain, urinary retention and perianal anesthesia with motor and sensory findings in the lower extremities. The most probable diagnosis is:
a. Motor neuron disease
b. Cauda equina syndrome
c. OP poisoning
d. Transverse myelitis

ANSWERS

91.d. $MgSO_4$	92.b. Biopsy of the mass	93.c. Mullerian dysgenesis
94.d. Eclampsia	95.b. Ampulla	96.b. Urethra
97.c. Lateral fornix	98.c. Morning urine	99.b. Candida
100.d. Cervical Ca	101.b. Radial nerve	102.a. Median nerve
103.b. Erbs palsy	104.b. X-ray of Spine	105.b. Cauda equina syndrome

106. The nerve most likely to get injured by intra muscular injection is:
a. Radial nerve
b. Ulnar nerve
c. Musculocutaneous nerve
d. Axillary nerve

☞ *When intramuscular injections are given in deltoid, axillary nerve is most likely to get injured.*

107. A 5 year old boy presents with bow legs. His serum calcium was found low. The diagnosis is
a. Rickets b. Osteoporosis
c. Osteomalacia d. Muscle dystrophy

ENT

108. A person after few days, of ear cleaning with a stick complains of pain in the ear and tragal tenderness. The most probable diagnosis is:
a. ASOM
b. Furuncle
c. Perichondritis
d. Extensive ottitis externa

☞ *Tragal tenderness is strong sign for presence of furunculosis.*

109. Most common cause of unilateral nasal block with foul smelling in children is:
a. Rhinoliths b. Rhinosporidium
c. Allergic rhinitis d. foreign body

110. 'Thumb sign' in x-ray is seen in:
a. Epiglottitis
b. Adenoid
c. Laryngotracheobronchitis
d. Laryngitis

111. If a friend of your complains of nasal bleeding at his home what is your advice?
a. Pinch his nose and lean forwards
b. Pinch his nose and lean backwards
c. Run towards hospital
d. Lie supine in bed and pinch his nose

☞ *Pinching must be done at junction of bony and cartilaginous part of lateral nasal wall to be effective.*

Ophthalmology

112. A farmer gives a history of eye trauma with straw 2 days before. On examination cornea is white in color. What is the most probable diagnosis?
a. Bacterial corneal ulcer
b. Fungal corneal ulcer
c. Trachoma
d. Endophthalmitis

113. Chalazion is infection of :
a. Gland of Zies b. Meibomian gland
c. Sebaceous gland d. Gland of Moll

☞ *Chalazion is the **granulomatous inflammation** of the Meibomian gland.*

114. Which of the following cranial nerve is most likely to be compressed by cerebral aneurysm:
a. 3rd b. 4th
c. 6th d. 10th

☞ *Because of its proximity to circle of Willis, the third cranial nerve is likely.*

115. If a patient can rotate his eyeball medially but not laterally then the most likely intraocular muscle to be paralysed is:

106.d. Axillary nerve	107.a. Rickets	108.b. Furuncle
109.d. foreign body	110.a. Epiglottitis	111.a. Pinch his nose ...
112.b. Fungal corneal ulcer	113.b. Meibomian gland	114.a. 3rd

a. Lateral oblique b. Medial oblique
c. Lateral rectus d. Medial rectus

116. Bitot's spots is seen in eye due to deficiency of:
a. Vitamin E b. Vitamin C
c. Vitamin A d. Vitamin B 12

117. Color vision is due to:
a. Cones b. bipolar cells
c. Rods d. Occipital

118. Visual acuity is measured from the distance of:
a. 6 feet b. 6 metres
c. 3 metres d. 60 feet

Anesthesia

119. The least preferable techniques of lower segment caesarean section is
a. General anesthesia
b. Caudal anesthesia
c. Spinal anesthesia
d. Both Spinal and epidural anesthesia

120. What is the percentage bupivacaine used in spinal anesthesia:
a. 1 % b. 2%
c. 0.5% d. 5%

ANSWERS

106d. Axillary nerve	107a. Rickets	108.b. Furuncle
109.d. foreign body	110.a. Epiglottitis	111.a. Pinch his nose ...
112.b. Fungal corneal ulcer	113.b. Meibomian gland	114.a. 3rd
115.c. Lateral rectus	116.c. Vitamin A	117.a. Cones
118.b. 6 metres	119.b. Caudal anesthesia	120.c. 0.5%

121. More than 3 units of blood transfusion is supplemented with:
a. Frusemide
b. Calcium gluconate
c. Sodium bicarbonate
d. Vitamin

☞ *Calcium gluconate is to be given along with monitoring the potassium concentration as there is increased chances of hyperkalemia with high amount of blood transfusion.*

122. Compression to respiration ratio in CPR is:
a. 15:2 b. 15:1
c. 30:2 d. 5:1

123. In a patient of brain abscess which of the following investigation you would not like to advice?
a. CT scan
b. MRI scan
c. Lumbar pucture
d. Routine blood investigation

124. A 28 year old male presents with closed fracture of right distal radius. He was given hematoma block with 2% lignocaine for reduction. Soon after injection he developed perioral tingling sensation. What is the diagnosis:
a. Fat embolism
b. Compartment syndrome
c. Lignocaine toxicity
d. Hypokalemia

☞ *Earliest symptom of lignocaine toxicity is perioral numbness and tingling.*

125. What gauge needle is used to resuscitate a child?
a. 18 b. 20
c. 22 d. 24

126. What is the most likely complication after a successful spinal anesthesia?
a. Hypertension b. Hypotension
c. Headache d. Meningitis

Dermatology

127. A patient comes with painful penile ulcer. What is your most probable diagnosis?
a. Primary syphilis b. Secondary syphilis
c. Gonorrhea d. Chancroid

☞ *Syphilitic ulcers are not painful.*

Psychiatry

128. Flight of ideas is a feature of:
a. Mania b. Schizophrenia
c. Depression d. OCD

129. Which of the following is an indication of ECT:
a. General anxiety disorder
b. Drug addiction
c. Severe Depression
d. All of the above

Electroconvulsive therapy (ECT)

121.b. Calcium gluconate	122.c. 30:2	123.c. Lumber pucture
124.c. Lignocaine toxicity	125.a. 18	126.b. Hypotension
127.d. Chancroid	128a. Mania	129c. Severe Depression

130. Which of the following antidepressant drug is SSRI? Selective serotonin reuptake inhibitor
a. Imipramine b. Amitriptyline
c. Fluoxetine d. All of the above

Comprehensive Structured Questions

A. A 38 year old female presented gynecology department with history of heavier menstruation than usual. On pelvic examination, she had an enlarged uterus about the size of 8-week pregnant uterus. Urine pregnancy test was negative. Her CBC is normal. A pelvic ultrasound shows 2 fibroids within the uterine wall measuring 2 cm each.

131. If malignant change is found on further study it is known as:
a. Sarcoma
b. Fibrosarcoma
c. Rhabdomyosarcoma
d. Fibromyoma

132. If the patient had completed her family then what would be the treatment of choice in this case?
a. Hysterectomy
b. Myomectomy
c. TAH with bilateral oophorectomy
d. Hormonal therapy

133. What is the most common type of fibroid?
a. Subserosal b. Intramural
c. Submucosal d. Cervical

134. Fibromyoma is dependent on which of the following hormone:
a. Progesterone
b. LH
c. Estrogen
d. Both estrogen and progesterone

135. All of the following causes shrinkage of fibroid EXCEPT:
a. Mifepristone b. Danazol
c. GnRH analogue d. Mirena

ANSWERS		
121.b. Calcium gluconate	122.c. 30:2	123.c. Lumber pucture
124.c. Lignocaine toxicity	125.a. 18	126.b. Hypotension
127.d. Chancroid	128a. Mania	129c. Severe Depression
130.c. Fluoxetine	131.a. Sarcoma	132.a. Hysterectomy
133.b. Intramural	134.c. Estrogen	135.d. Mirena

B. A 26 year old male presented with headache, fever with chills and rigors and vomiting for 2 days. He is drowsy and confused.One eye examination, pupils are dilated & poorly reactive. His BP was 180/100 mm Hg, pulse was 50/min and respiration was irregular. On examination he had neck rigidity CSF examination shows cloudy appearance with cell count around 200 (lymphocytic predominant) and high protein.

136. What is the diagnosis?
a. Meningococcal meningitis
b. Tubercular meningitis
c. Cryptococcal meningitis
d. Viral meningitis

☞ *In this scenario, one may get confused between viral and tubercular meningitis; but in viral meningitis, the gross appearance CSF is never turbid and the protein level is only slightly raised.*

Parameters (Normal values)	*Bacterial meningitis*	*Tuberculous meningitis*	*Viral meningitis*
Pressure	*Raised*	*Raised*	*Raised*
Gross appearance	*Turbid*	*Clear (may clot)*	*Clear*
Protein (Normal: 20-50 mg/dL)	*High*	*Very high*	*Slightly high*
Glucose (40-70 mg/dL)	*Very low*	*low*	*Normal*
Chloride (116-122□g/dL)	*Low*	*Very Low*	*Normal*
Cells < 5/microlit	*Neutrophils*	*Pleocytosis (Lymphocytes and neutrophils in CSF)*	*Lymphocytosis*

137. What is the drug you would like to add in this case?
a. Steroid b. Acyclovir
c. Antifungal d. ATT with steroid

138. Which of the following regimen will you start in case of tubercular meningitis?
a. 2KRZES + 4HR
b. 2HRZE + 4HR
c. 2HRZES + I HRZE + 6HE
d. 2HRZ + 6 HE

136.b. Tubercular meningitis	137.d. ATT with steroid	138.b. 2HRZE + 4HR
140.a. Amphotericin B		141.c. Septic arthritis

139. Which of the following is the commonest cause of pyogenic meningitis in neonate?

a. Gram positive cocci
b. Gram negative cocci
c. Gram negative bacilli
d. Gram positive bacilli

140. What is the drug of choice in the treatment of cryptococcal meningitis?

a. Amphotericin B b. Fluconazole
c. Acyclovir d. Ketoconazole

☞ *Amphotericin has good CSF penetration.*

C. A 5 year old male child comes with the history of severe throbbing pain, swelling and redness around the hip joint. On examination child has high grade fever and child is unable to walk.

141. What is the most probable diagnosis?

a. Congenital hip dislocation
b. Osteomyelitis of femur
c. Septic arthritis
d. Rheumatoid arthritis

☞ *Absent movements of a joint after ruling out trauma in pediatric population is septic arthritis till proved otherwise.*

142. What radiological imaging of hip joint would you suggest in this case?

a. CT scan b. USG
c. MRI d. X-ray

☞ *USG is very sensitive to detect the collection of pus. Joint effusion is detected by USG in early stage. Widening of space between joint and capsule > 2 mm indicates effusion which is echogenic in septic arthritis (echo-free → transient synovitis).*

143. What is the most diagnostic investigation in this case?

a. USG hip joint
b. Blood culture
c. Joint aspiration and culture
d. X-ray of hip joint

☞ *Joint aspiration (Arthrocentesis) and C/S of the fluid is the confirmatory investigation.*

144. What is the most common causative organism for pyogenic arthritis in children?

a. Staphylococcus b. Streptococcus
c. Pneumococcus d. Gonococcus

☞ *Staph. aureus (most common in all age group) and H influenza (Children 1 – 4 years) are common organisms responsible for pyogenic arthritis.*

145. What is the most common route of infection in this case?

a. Secondary to osteomyelitis
b. Penetrating wound
c. Iatrogenic
d. Hematogenous

D. A 48 year old male patient who was under medication with enalapril and hydrochlorthiazide for hypertension since last month complains of intractable dry cough with no other symptoms for past few days.

146. What is the most likely cause of cough in this case?

a. Chest infection b. Enalapril
c. Hydrochlorthiazide d. Hypertension

147. How would you manage the dry cough in this patient?

a. Remove enalapril
b. Cough suppresant
c. Treat the chest infection
d. Substitute an angiotensin II receptor blocker for the ACE inhibitor

148. What is the dose of enalapril in this patient?

a. 5 mg b. 50 mg
c. 500 mg d. 1 g

149. Which of the following is responsible for the cough?

a. Vagal stimulation b. Bradykinin
c. Histamine d. All of the above

150. All Of the followings are the side effect of ACE inhibitor except:

a. Hypotension b. Angioedema
c. Hypokalemia d. Cough

☞ *ACE inhibitors cause hyperkalemia and not hypokalemia*

ANSWERS

136.b. Tubercular meningitis	137.d. ATT with steroid	138.b. 2HRZE + 4HR
139.c. Gram negative bacilli	140.a. Amphotericin B	141.c. Septic arthritis
142.b. USG	143.c. Joint aspiration and culture	144.a. Staphylococcus
145.d. Hematogenous	146.b. Enalapril	147.d. Substitute an angiotensin ...
148.a. 5 mg	149.b. Bradykinin	150.c. Hypokalemia

PART-19

E. A 28 year old primi with 35 weeks of pregnancy came in emergency with seizure and coma. She was previously normotensive but on examination her BP was raised and pitting edema was present on lower limb.

151. What is the most likely diagnosis?
a. Eclampsia
b. Seizure disorder
c. Pre-eclampsia
d. Gestational hypertension

152. What is the minimum BP (in mm of Hg) required for the diagnosis?
a. 130/90 b. 140/80
c. 140/90 d. 160/90

153. Not a component of Lytic Cocktail regimen:
a. Chlorpromazine b. $MgSO_4$
c. Promethazine d. Pethidine

154. What is the fluid of choice in this patient?
a. NS b. RL
c. DNS d. Colloid

155. All of the following statements regarding Magnesium sulphate are true EXCEPT:
a. Drug of choice
b. Comes in 20% solution
c. Can cause muscle paresis, respiratory failure and renal dysfunction
d. Maintenance dose should be continued for 24 hours after last seizure

F. A 30 year old female comes in gynae OPD with history of amenorrhea for 14 weeks. On examination her uterus was intrapelvic and USG shows 10 weeks of pregnancy with fetal heart sound of 140/min.

156. What is the cause for difference in the dating of gestational period by history and USG?
a. Twin pregnancy
b. Molar pregnancy
c. False dating history
d. Incomplete abortion

157. In this case when will you suggest the patient for next USG?
a. The next day b. In 18-20 weeks
c. In 24 weeks d. In 14-16 weeks

158. Which of the following is not a pelvic sign seen in 1st trimester of pregnancy?
a. Jacquemer's sign
b. Chadwick's sign
c. Montgomery's tubercle
d. Osiander's sign

159. When will you advice supplementary iron therapy to a pregnant lady?
a. 16 weeks onwards
b. 12 weeks onwards
c. 1 month prior to pregnancy
d. 20 weeks onwards

☞ ***Supplementary nutritional therapy:*** *There is negative iron balance during pregnancy and the dietetic iron is not enough to meet the daily requirement especially in the second half of the pregnancy. Thus,* ***supplementary iron therapy is needed for all pregnant mothers from 16 weeks onwards.*** *Above 10 gm% of hemoglobin, 1 tablet of ferrous sulfate (Fersolate) containing 60 mg of elemental iron is enough. The dose should be proportionately increased with lower hemoglobin level to 2–3 tablets a day.* ***3 tablets provide 45 mg of absorbable iron.*** *As the essential vitamins are either lacking in the foods or are destroyed during cooking, supplementary vitamins are to be given daily from 20th week onwards.*

160. Which of the following drug is NOT contraindicated in pregnancy:
a. Aspirin b. Acetaminophen
c. Lithium d. ACE inhibitors

G. A 15 year old boy gives a history of petechiae and purpuric rashes over the bilateral lower limbs. He gives history of flu-like symptoms 10 days ago. There is no history of fever, seizure, epistaxis and abdominal pain. Routine investigations reveals Hb:12.5gm%, platelets 60,000and normal PT andCBC.

161. What is the probable diagnosis?
a. Hemophilia
b. HSP
c. Pyogenic meningitis
b. ITP

☞ ***Note:*** *In HSP platelets count is normal.*

162. What is the normal value of bleeding time?
a. 2-8 min b. 1 hr
c. < 2min d. 20-40 sec

151.a. Eclampsia	152.c. 140/90	153.b. $MgSO_4$
154.b. RL	155.b. Comes in 20% solution	156.c. False dating history
157.b. In 18-20 weeks	158.c. Montgomery's tubercle	159.a. 16 weeks onwards
160.b. Acetaminophen	161.b. ITP	162.a. 2-8 min

163. **How would you proceed for the management of this case?**
   a. Obtain a bone marrow picture
   b. Go for surgical consultation
   c. Regular follow up with platelets report
   d. Counsel patient for Dialysis

164. **The most dreaded complication in this case is:**
   a. DIC
   b. Hemarthroses
   c. Intracranial bleeding
   d. Anemia

165. **In patient of chronic ITP splenectomy produces complete remission in about 70%. All of the following vaccines are necessary for the patient 2-3 weeks prior to the splenectomy EXCEPT:**
   a. Hemophilus influenza B
   b. Meningococcal group C
   c. Pneumococcal
   d. Hepatitis B

   ☞ *Vaccines against capsulated organisms are necessary prior to splenectomy. H. influenzae, meningococcus and pneumococcus are all capsulated organism.*

ANSWERS		
151.a. Eclampsia	152.c. 140/90	153.b. $MgSO_4$
154.b. RL	155.b. Comes in 20% solution	156.c. False dating history
157.b. In 18-20 weeks	158.c. Montgomery's tubercle	159.a. 16 weeks onwards
160.b. Acetaminophen	161.b. ITP	162.a. 2-8 min
163.c. Regular follow ...	164.c. Intracranial bleeding	165.d. Hepatitis B

H. A 10 years old male presents with massive lower extremity edema and foamy urine later notes cough and pleuritic right-side chest pain, unresponsive to treatment for community acquired pneumonia. On examination, he has normal pulse and BP but has periorbital puffiness and gross edema evidence of right pleural effusion and evidence of ascites.

166. **What is the most probable cause for this disease?**
   a. Minimal change disease
   b. Membranous nephropathy
   c. DM
   d. SLE

   ☞ *Minimal change disease is the commonest cause of nephrotic syndrome in children.*

167. **Not an essential feature of nephrotic syndrome is:**
   a. Hypoalbuminemia b. Pitting edema
   c. Proteinuria d. Hypertension

   ☞ *Presence of hypertension points to nephritic syndrome.*

168. **In minimal change disease, light microscopic examination shows:**
   a. Fusion of foot process
   b. Starry appearance
   c. Crescentic GN
   d. Normal Glomerulus

169. **Gold standard investigation for diagnosis of nephritic syndrome:**
   a. Renal biopsy
   b. Serological markers
   c. Urine examination
   d. Radiology

170. **The normal GFR is:**
   a. 125 ml/hour b. 125 ml/day
   c. 125 ml/min d. 125 ml/day

I. A 27 year old young female comes to medicine OPD with history of fatigue, weakness and heavy bleeding during cycles over past several months. On examination patient was pale and her HR was 110/min.

171. **What is the most likely diagnosis?**
   a. Megaloblastic anemia
   b. Iron deficiency anemia
   c. Thalassemia
   d. Anemia of chronic disease

172. **The best single diagnostic investigation in this case is:**
   a. Hemoglobin count b. Plasma ferritin
   c. TIBC d. PCV

173. **If the patient was post-menopausal and on normal diet. What other investigation should be considered?**
   a. UGI endoscopy
   b. Stool for occult blood
   c. Colonoscopy
   d. All of the above

166.a. Minimal change disease	167.d. Hypertension	168.d. Normal Glomerulus
169.a. Renal biopsy	170.c. 125 ml/min	171.b. Iron deficiency anemia
172.b. Plasma ferritin	173.d. All of the above	176.d. Iron sobitrate

174. **Which of the following is the parenteral formulation for treating this condition?**
   a. Ferrous gluconate b. Ferrous sulphate
   c. Ferrous fumarate d. Iron sobitrate

175. **What is the expected morphology of RBC in the blood sample of this patient?**
   a. Macrocytic hyperchromic
   b. Microcytic hypochromic
   c. Macrocytic hypochromic
   d. Microcytic hyperchromic

J. **A 27 year old female was brought in the emergency department with flame burns over her head and neck, anterior trunk and right upper and lower limb. On examination, the areas of burn over the trunk were moist with blisters and were very painful to touch and those over the limbs were parchment like. With visible thrombosed vessels.**

176. **Calculate the total % of burn:**
   a. 50% b. 54%
   c. 63% d. 45%

177. **What is the fluid of choice in the patient?**
   a. NS b. DNS
   c. 5% Dextrose d. RL

178. **Calculate the total amount of fluid to be given in 24 hours if her weight was 50 kg.**
   a. 10.8 liters b. 10 liters
   c. 12 liters d. 8 liters

   ☞ *Fluid required = (4ml × % of burn × body weight)*
   ☞ *For burn with > 50 % of TBSA, maximum TBSA that can be taken is 50% only.*
   ☞ *Hence, total fluid in ml = 4 × 50 × 50 = 10000 ml*

179. **If the patient has singeing of nasal hair and her throat was stained with black smoke. What does it indicate?**
   a. Massive burn
   b. Bad prognosis
   c. Poisoning case as well
   d. Gastric lavage was done

   ☞ *Presence of an inhalational injury (Presence of warning signs of respiratory system) always denotes bad prognosis of burn. Other warning signs of inhalational injury apart from mentioned in this case are burn in face area, stridor and change of voice.*

180. **How would you manage this case?**
   a. Fluid therapy
   b. Analgesics
   c. Tetanus prophylaxis
   d. All of the above

ANSWERS

166.a. Minimal change disease	167.d. Hypertension	168.d. Normal Glomerulus
169.a. Renal biopsy	170.c. 125 ml/min	171.b. Iron deficiency anemia
172.b. Plasma ferritin	173.d. All of the above	176.d. Iron sobitrate
175.b. Microcytic hypochromic	176.b. 54%	177.d. RL
178.b. 10 liters	179.b. Bad diagnosis	180.d. All of the above

यहा सम्म सकियो

NMCLE - CHAITRA 2069

Anatomy

1. **The umbilical cord contains:**
   a. 1 artery and 2 veins
   b. 1 artery and 1 vein
   c. 2 arteries and 1 vein
   d. 2 arteries and 2 veins

2. **Winging of scapula is due to weakness of:**
   a. Serratus anterior muscle
   b. Pectoralis major muscle
   c. Deltoid
   d. Teres major

   ☞ *Long thoracic nerve (ventral rami of C5, C6 & C7) supplies Serratus anterior muscle. Its injury produces a deformity called Winging of Scapula (also called as Scapula alta). It is called winged scapula as the inferior angle of the scapula protrudes between instead of lying flat.*

3. **Deep inguinal ring is:**
   a. Defect in fascia transversalis
   b. Natural opening in internal oblique aponeurosis.
   c. Defect to external oblique aponeurosis.
   d. Canal for inguinal ligament.

   ☞ ***Superficial inguinal ring**: a triangular opening in the **external oblique aponeurosis** and is 1.25 cm above the pubic tubercle.*
   ☞ ***Deep inguinal ring**: a 'U' shaped condensation of **transversalis fascia**, lies 1.25 cm above the inguinal ligament between pubic symphysis and ASIS.*
   ☞ ***Inguinal ligament**: formed by the lower border of the **external oblique aponeurosis** which is thickened and folded backwards on itself, extending from ASIS to pubic tubercle.*
   ☞ ***Hernia is prevented by external oblique muscle.***

Physiology

4. **Which of the following is true regarding Bainbridge reflex:**
   a. Is a not a true reflex
   b. Rapid infusion of fluids leads to increase in heart rate:
   c. Abolished by bilateral vagotomy
   d. Due to response to local stretch

   ***Bain Bridge reflex**, also called the atrial reflex, is an increase in heart rate due to an increase in central venous pressure. Increased blood volume is detected by stretch receptors (Cardiac Receptors) located in both atria at the venoatrial junctions. Rapid infusion of blood or saline produces a rise in heart rate if the initial heart rate is low. It is a true reflex rather than a local response.*

5. **Which of the following is lipid binding protein?**
   a. Apoprotein b. Paraprotein
   c. Paramines d. Lipoprotein

Pathology

6. **Neoplastic cells derive energy by:**
   a. Increased mitochondrial activity
   b. High rate of glycolysis
   c. Kreb's cycle
   d. HMP shunt

   ☞ *Most cancer cells predominantly produce energy by a high rate of glycolysis followed by lactic acid fermentation in the cytosol, rather than by a comparatively low rate of glycolysis followed by oxidation of pyruvate in mitochondria as in most normal cells. This is called as Warburg effect.*
   ☞ *"Warburg Effect" describes the preference of glycolysis and lactate fermentation rather than oxidative phosphorylation for energy production in cancer cells. Mitochondrial metabolism is an important and necessary component in the functioning and maintenance of the organelle, and accumulating evidence suggests that dysfunction of mitochondrial metabolism plays a role in cancer.*

7. **Paraneoplastic syndrome is seen in:**
   a. Small cell carcinoma of lung
   b. Anaplastic carcinoma of lung
   c. Adenocarcinoma lung
   d. All of the above

Pharmacology

8. **Closure of PDA is facilitated by:**
   a. Aspirin
   b. Magnesium sulphate
   c. Indomethacin
   d. Paracetamol

PART-19

1.c.	2 arteries and 1 vein	2.a.	Serratus anterior muscle	3.a.	Defect in fascia transversalis	4.b.	Rapid infusion of ...	5.d.	Lipoprotein	6.b.	High rate of glycolysis
7.a.	Small cell carcinoma of lung	8.c.	Indomethacin								

9.c.	Octreotide						
10.a.	Nystatin	11.c.	Methicillin	12.a.	Vancomycin		
13.b.	Pulmonary hypertension						

9. **Which of the following is somatostatin analogue?**
   a. Vasopressin b. Lumefantrine
   c. Octreotide d. VAP

10. **Not effective for dermatophytes:**
   a. Nystatin b. Fluconazole
   c. Griseofulvin d. Miconazole

11. **Which of the following is penicillinase resistant?**
   a. Amoxycillin b. Ampicillin
   c. Methicillin d. Penicillin V

12. **The drug of choice for MRSA is:**
   a. Vancomycin b. Metronidazole
   c. Cloxacillin d. Penicillin G

13. **Sildenafil is used in:**
   a. Malignant hypertension
   b. Pulmonary hypertension
   c. Headache
   d. Left ventricular failure

   ☞ *Sildenafil is used in Sexual (erectile) dysfunction, pulmonary artery hypertension, antidepressant associated sexual dysfunction and altitude sickness.*

Biochemistry

14. **Anion gap is calculated from all except:**
   a. Sulphates b. Sodium
   c. Chloride d. Bicarbonate

   ☞ *The anion gap is calculated by subtracting the serum concentrations of chloride and bicarbonate (anions) from the concentrations of sodium and potassium (cations): Anion gap = $([Na^+] + [K^+]) - ([Cl^-] + [HCO^{-3}])$*

   ☞ *Because potassium concentrations are very low, they usually have little effect on the calculated gap. Therefore, omission of potassium has become widely accepted. This leaves the following equation: Anion gap = $[Na^+] - ([Cl^-] + [HCO^{-3}])$*

   ☞ *Expressed in words, the equation is: Anion Gap = Sodium - (Chloride + Bicarbonate)*

   ☞ *The reference range of the anion gap is 3-11 mEq/L.*

15. **Which of the following helps in transamination?**
   a. Vit B6 b. Vit B 1
   c. Vit B2 d. Vit B3

16. **In polymerase chain reaction:**
   a. Multiple RNA copies are made from single RNA
   b. Recombinant DNA amplification
   c. Enzymatic DNA amplification
   d. Protein synthesis

17. **All are essential amino acids except:**
   a. Tyrosine b. Valine
   c. Tryptophan d. Lysine

18. **Which is the most essential fatty acid?**
   a. Omega 3 fatty acid
   b. Linolenic acid
   c. Linoleic acid
   d. Arachidonic acid

   ☞ *Essential fatty acids are polyunsaturated fatty acid (PUFA). These are of two types; omega-3 and omega-6. Omega-6 mostly comes as linoleic acid from plant oils such as corn oil, soybean oil, and sunflower oil, as well as from nuts and seeds. The American Heart Association recommends that at least 5% to 10% of food calories come from omega-6 fatty acids.*

   ☞ *Another reason for which linoleic acid is most EFA is that it serves for production of other EFA.*

Microbiology

19. **An aerobic organism which produce hemolysis and found in chains is:**
   a. Streptococcus pyogenes
   b. Staphylococcus
   c. Streptococcus Pneumoniae
   d. All of the above

   GROUP PATTERN OF BACTERIA

   ☞ *Chains: Strepto. pyogenes*

   ☞ *Grape like clusters – Staph. aureus*

   ☞ *Cuneiform/Chineseletter pattern: C. diphtheriae*

   ☞ *Diplococci: N. gonorrhae, Moraxella catarrhalis*

   ☞ *Tetrads: Micrococci*

   ☞ *Octads: Sarcina*

20. **What is the significant count of organisms in urine culture in UTI?**
   a. $>10^5$organisms/ml b. $>10^4$organism/ml
   c. $>10^3$organisms/ml d. $>10^6$organism/ml

21. **Red colony of E. coli grows in:**
   a. Enriched medium
   b. Nutrient agar

Answers:

1.c.	2 arteries and 1 vein	2.a.	Serratus anterior muscle	3.a.	Defect in fascia transversalis
4.b.	Rapid infusion of ...	5.d.	Lipoprotein	6.b.	High rate of glycolysis
7.a.	Small cell carcinoma of lung	8.c.	Indomethacin	9.c.	Octreotide
10.a.	Nystatin	11.c.	Methicillin	12.a.	Vancomycin
13.b.	Pulmonary hypertension	14.a.	Sulphates	15.a.	Vit B6
16.c.	Enzymatic DNA amplification	17.a.	Tyrosine	18.c.	Linoleic acid
19.a.	Streptococcus pyogenes	20.a.	$>10^5$organisms/ml	21.c.	McConkey's medium

c. McConkey's medium
d. Blood agar

☞ *Mac Conkeys's media is both selective and differential media. Lactose-fermenting enteric bacteria grow pink colonies on MacConkey agar. Examples include Citrobacter, Klebsiella, E. coli, Enterobacter, and Serratia (weak fermenter). E. coli produces β-galactosidase, which breaks down lactose into glucose and galactose. It differentiates lactose fermenting colonies of E. coli (appearing red/pink) and non–lactose fermenting colonies of salmonella and Shigella (Appearing transparent).*

22. Which species commonly causes cerebral malaria?
a. Plasmodium ovale
b. Plasmodium malariae
c. Plasmodium falciparum
d. Plasmodium vivax

23. In drug addicts, endocarditis is common due to:
a. Pseudomonas
b. Staphylococcus aureus
c. Streptococcus viridans
d. Group D streptococcus

Community medicine

24. Relative risk is given by:
a. Case control study
b. Cohort study
c. Descriptive epidemiology
d. Randomized control trials

25. Most repeated value in a sample is given by:
a. Mode b. Median
c. Mean d. Dispersion

26. Health promotion and specific protection fall under:
a. Primordial prevention
b. Primary prevention
c. Secondary prevention
d. Tertiary prevention

☞ *Health promotion and specific protection are the modes of intervention for primary level of prevention.*
Note: *For description about levels of prevention, see the review notes of Community medicine.*

27. Human milk is poor source of:
a. Iron b. Calcium
c. Protein d. Carbohydrates

☞ *Human milk is deficient in Vitamin C and iron; similarly eggs are deficient in carbohydrate and vitamin C.*

28. Life-long immunity after an infection is given by:
a. Mumps b. Rabies
c. Measles d. Tetanus

29. Vector of Japanese Encephalitis is:
a. Culex b. Aedes
c. Anopheles d. Mansonia

30. Incidence of a disease in a long term is given by:
a. Cohort study b. Case control study
c. Descriptive study d. All of the above

☞ *Table for useful parameters obtained by epidemiological studies.*

Epidemiological studies	Useful parameter(s) obtained
Cohort study	Incidence, Relative risk (RR), Attributable risk (AR)
Case control study	Odds ratio
Cross sectional study	Prevalence
Ecological study	Group characteristics

Answers:

16.c. Enzymatic DNA amplification	17.a. Tyrosine	18.c. Linoleic acid
19.a. Streptococcus pyogenes	20.a. >10^5organisms/ml	21.c. McConkey's medium
22.c. Plasmodium falciparum	23.b. Staphylococcus aureus	24.b. Cohort study
25.a. Mode	26.b. Primary prevention	27.a. Iron
28.a. Mumps	29.a. Culex	30.a. Cohort study

31. World health day is celebrated on:
a. April 12 b. May 14
c. December 21 d. April 7

32. Which of the following is drug for radical treatment for malaria?
a. Primaquine b. Mefloquine
c. Chloroquine d. Quinine

33. Measles vaccine is given at:
a. 9 months b. 12 months
c. 6 months d. At birth

☞ *Till 9 months maternal antibodies are present to protect against measles.*

31.d. April 7	32.a. Primaquine	33.a. 9 months

PART -19

34. Null hypothesis is rejected when P value is less than:

a. 0.1 b. 0.05
c. 0.2 d. 0.5

35. "Father of public health":

a. Cholera b. Eberth
c. Koch d. Pasteur

36. "Human development index" comprises all of the following except:

a. Longevity (life expectancy at birth)
b. GDP per capita
c. Knowledge
d. Life expectancy at 1

Human development index (HDI) consists of 3 indicators

- *Longevity (life expectancy at birth: LE_0)*
- *Income per capita GDP (In US$)*
- *Knowledge (mean years of schooling, gross enrollment ratio & literacy rate)*

The value of HDI ranges from 0 to +1

37. A disease not present in a country and brought from outside is:

a. Endemic b. Pandemic
c. Epidemic d. Exotic

38. In an Epidemic, the first case that comes to the notice of an investigator is:

a. Primary case b. Secondary case
c. Index case d. Prime case

- ***Primary case:*** *First case of communicable disease introduced in the population unit being studied.*
- ***Secondary case:*** *Cases that develop from contact with primary case.*
- ***Index case:*** *First case that comes to the notice of the investigator (first case reported to the health system)*

39. Framingham heart study is an example of

a. Cohort study
b. Case control study
c. Descriptive study
d. Randomized controlled trial

40. BCG vaccine is given:

a. Subcutaneous b. Intradermal
c. Intramuscular d. Oral

41. Post exposure prophylaxis for Rabies is:

a. Day 0, 3, 7
b. Day 0, 7, 28
c. Day 0, 3, 7, 14, 21, 90
d. Day 0, 3, 7, 14, 28

Forensic medicine

42. Battles' sign is:

a. Subconjuctival hemorrhage extending beyond the lateral canthus
b. Bruising over the mastoid process
c. Hematoma over the nasal septum
d. Periorbital bruising

43. In case of an unconscious patient with head injury requiring emergency surgery and there are no relatives to give the consent, the doctor should:

a. Operate without consent
b. Operate only with consent of police
c. Operate only with consent of medical superintendent
d. Do not operate at all

44. The minimum age required to give consent for surgery is:

a. 16 b. 18
c. 21 d. 24

45. An 18 year son of a farmer was found in the paddy field with pinpoint pupil and lacrimation. What is the likely cause?

a. OP poisoning b. Lead poisoning
c. Dhatura poisoning d. Mercury poisoning

Answers:

31.d. April 7	32.a. Primaquine	33.a. 9 months
34.b. 0.05	35.a. Cholera	36.d. Life expectancy at 1
37.d. Exotic	38.c. Index case	39.a. Cohort study
40.b. Intradermal	41.d. Day 0, 3, 7, 14, 28	42.b. Bruising over ...
43.a. Operate without consent	44.a. 16	45.a. OP poisoning

46. What is the antidote to paracetamol poisoning?

a. N-acetylcysteine b. Desferrioxamine
c. Vitamin k d. Atropine

Internal medicine

47. What is the blood picture in Iron Deficiency Anemia?

a. Microcytic and hypochromic
b. Macrocytic and normochromic
c. Microcytic and normochromic
d. Macrocytic and hypochromic

46.a. N-acetylcysteine	47.a. Microcytic and hypochromic

48. In P/A view X-ray chest, the right border of heart is formed by:

a. Right atrium b. Right ventricle
c. Left atrium d. Left ventricle

49. A 40 year old male has BMI of 30, FBS 150 mg%. What anti-diabetic drug will you prescribe him?

a. Metformin b. Glimiperide
c. Insulin d. Sitagliptin

Metformin is preferred in obese diabetics.

50. In a patient with acute pancreatitis, which of the following is less likely?

a. Increased serum amylase
b. Increased serum lipase
c. Decreased Calcium
d. Increased total proteins

51. A 40 years male uses NSAIDs rampantly for joint pain. He presents to your clinic with abdominal pain. What is the most likely finding in endoscopy?

a. Acute gastritis
b. Atrophic gastritis
c. Adenocarcinoma
d. Perforation of stomach

52. Which of the following enzyme can be therapeutically used?

a. Amylase b. Transferase
c. Streptokinase d. Renin

53. In sarcoidosis, which of the following is used for diagnosis?

a. Calcium b. Uric acid
c. ALP d. ACE

☞ *Levels of ACE are raised in 50-80% cases of sarcoidosis. The rise in levels of ACE supports the diagnosis but cannot solely be used for the diagnosis of sarcoidosis.*

54. In petit mal (absence) epilepsy the drug of choice is:

a. Phenobarbitone b. Phenytoin
c. Valproic acid d. Ethosuximide

☞ *In a case of diagnosed typical absence seizure ethosuximide is the drug of choice. Valproate is equally as effective as ethosuximide in newly diagnosed childhood absence epilepsy, but it is associated with more adverse effects.*

☞ *But in atypical absence seizures ethosuximide is not indicated (Valproate or Lamotrigine is used).*

☞ *For patients who have other seizure types such as generalized tonic clonic or myoclonic seizures, valproic acid is the only choice supported by clinical trials. Hence,valproic acid is now considered ahead of ethosuximide.*

☞ *Apart from GTCS, Valproic acid is also particularly effective in absence, myoclonic, and atonic seizures. It is therefore the drug of choice in patients with atypical absence seizure as well as typical absence seizure.*

(Source: Harrison's principles of Internal medicine, 19th edition, page 2552.)

55. Trigeminal neuralgia is treated with:

a. Indomethacin b. Chlorpromazine
c. Phenobarbitone d. Carbamazepine

56. Microcytic hypochromic anemia is not seen in:

a. Fanconi's anemia
b. Iron deficiency anemia
c. Lead poisoning
d. Thalassemia major

57. Palmar erythema is seen in:

a. Respiratory failure b. ARF
c. CHF d. Hepatic failure

58. All are seen with hyperkalemia except:

a. High T wave
b. Prolonged PR interval
c. Loss of P wave
d. Prolonged QT interval

☞ *The most important effect of hyperkalemia is on the heart producing arrhythmias. Check an ECG immediately in a hyperkalemic patient. With increasing potassium, ECG changes progress through tall & peaked T waves, QRS widening, PR interval prolongation, loss of P waves, and finally a sine wave pattern.*

59. Streptokinase therapy in myocardial infarction is most effective when given within:

a. <2 hours b. >24 hours
c. 4-6 hours d. 2-4 hours

☞ *Thrombolytic therapy remains an important treatment modality since PCI is still available only at specialized centers. It is useful for patients who present later, and for those in whom PCI is contraindicated.*

☞ *Early treatment is crucial to salvage as much of the myocardium as possible. Administer as soon as possible up to 24 hours after the onset of chest pain. Outcome is best if given within the first 6 hours.*

- *If no contraindications are present fibrinolytic therapy should ideally be initiated within 30 min of presentation (i.e., door-to-needle time ≤30 min).*
- *The appropriate use of thrombolytic therapy can reduce hospital mortality by 25–50% and this survival advantage is maintained for at least 10 years.* ***The benefit is greatest in those patients who receive treatment within the first few hours.***
- *Indications: ST segment elevation in two contiguous ECG leads in patients with pain onset within 6 hours who have been refractory to nitroglycerin.*
- *Alteplase has been shown to have the best outcomes amongst thrombolytic medications, and is the first choice in many centers, despite its high costs. Alternatives include streptokinase, tenecteplase, reteplase, lanoteplase, and urokinase.*

60. Pernicious anemia is due to deficiency of:

a. Pyridoxine b. Folic acid
c. Vitamin B_{12} d. Vitamin D

Answers:

46.a. N-acetylcysteine	47.a. Microcytic and hypochromic	48.a. Right atrium
49.a. Metformin	50.d. Increased total proteins	51.a. Acute gastritis
52.c. Streptokinase	53.d. ACE	54.c. Valproic acid
55.d. Carbamazepine	56.a. Fanconi's anemia	57.d. Hepatic failure
58.d. Prolonged QT interval	59.a. <2 hours	60.c. Vitamin B_{12}

61. Osler's nodes are seen in:

a. Finger or toe pads in infective endocarditic
b. DIP joints in rheumatoid arthritis
c. DIP joints in osteoarthritis
d. PIP joints in osteoarthritis

62. Blue-green pus is seen in infection of:

a. Klebsiella b. Streptococcus
c. Staphylococcus d. Pseudomonas

63. Clubbing and hemoptysis is seen in:

a. Pneumonia b. Empyema
c. Crohn's disease d. Bronchiectasis

64. The most common site of cerebral hemorrhage in hypertension is:

a. Pons b. Cerebrum
c. Putamen d. Thalamus

65. Most of the deaths in myocardial infarction results in the day:

a. First b. Second
c. Fifth d. Seventh

66. In PSVT, the drug of choice is:

a. Adenosine b. Lignocaine
c. Quinidine d. Amiodarone

Surgery

67. A 14 year old boy opens eye on command, localizes pain and is well oriented. What is his GCS?

a. 10 b. 12
c. 13 d. 15

68. In case of head injury following RTA, the patient has features of cerebral compression. What should not be done?

a. Lumbar puncture b. Airway management
c. Neck stabilization d. CT scan head

- *There is* ***risk of brain herniation*** *as ICP is raised.*

69. A patient with DM has multiple abscess in the nape of neck which are intercommunicating and have sieve like openings. What is the most likely diagnosis?

a. Carbuncle
b. Erysipelas
c. Tubercular lymphadenitis
d. Antibioma

70. A 39 year old female has lump in the breast. After proper history and examination, which set of examination you prefer to go for?

a. USG and FNAC
b. Receptor analysis and FNAC
c. Mammography and FNAC
d. CT and biopsy

- ***Screening mammography:*** *For screening purpose it is done after 40 years. Early screening is indicated when thereis family history of carcinoma breast or histological riskfactor. Mammography before 35 years of age is usually notdone unless there is a suspicious lump or a strong familyhistory. Screening is done in asymptomatic female whereeven cancer is suspected.*

Indication for USG in breast

- *Symptomatic breast lump in women <35 years (more dense breast tissue).*

61.a. Finger or toe ...	62.d. Pseudomonas	63.d. Bronchiectasis
64.c. Putamen	65.a. First	66.a. Adenosine
67.c. 13	68.a. Lumbar puncture	69.a. Carbuncle
70.c. Mammography and FNAC	71.b. Percutaneous drainage of abscess	72.a. Serum ALP

- *Breast lump during lactation and pregnancy (denser breast tissue)*
- *Clinical breast mass with negative mammogram*
- *Breast inflammation*
- *Guidance of needle biopsy or localization.*

71. A patient with appendicular lump was on conservative management. After 48 hours the size of lump increased and there was increased pain. What would be your next step of management?

a. Appendectomy
b. Percutaneous drainage of abscess
c. Give broad spectrum antibiotics
d. Continue conservative management

Criteria to discontinue Ochsner-Sherren regimen

- *Patient becomes more toxic (tachycardia, high fever)*
- *Persistent vomiting*
- *Increase or spread of pain abdomen (means onset of diffuse peritonitis)*
- *Increased size of the mass*
- *Suppuration (abscess formation) in the mass*

In these patients the regimen is discontinued. The patient is taken for immediate surgery, either through laparotomy (if there is signs of peritonitis) or through classic approaches. As the size of the mass is increasing and also the common sequel of appendicular lump is abscess,extraperitoneal drainage of abscess is to be done followed by closing it with a drain in situ and continuous IV antibiotics. Interval appendectomy is done later after 3 months.

72. Which of the following enzyme is raised in obstructive jaundice?

a. Serum ALP b. Serum SGOT
c. Serum SGPT d. γ-GT

- *Gamma GT is raised in alcoholic liver diseases.*

73. What is the most common cause of pancreatitis?

a. Gallstone b. Autoimmune
c. Alcohol d. Viral pancreatitis

These two causes of acute pancreatitis constitutes almost 80% of cases.

- *Gall stones (most common)*
- *Alcohol (2nd most common)*

74. Neurofibromatosis is a disorder of autosomal dominant inheritance due to abnormal gene on chromosome:

a. 17 or 22 b. 18 or 21
c. 21 d. 22

75. Which of the following is predominant cells during days 3-4 of wound healing?

a. Fibroblasts b. Neutrophils
c. Macrophages d Platelets

Wound healing is divided into overlapping phages; hemostasis & inflammation, proliferation and maturation & remodeling. 1-2

1. ***Neutrophils peak in the first 24-48 hours*** *after the injury in response to many cytokines, IL-1, TNF-α and bacterial debris performing bacterial phagocytosis and limiting infection.* 2-4
2. ***Macrophages are present mostly at 48-96*** *hours post injury and functions in wound debridement, phagocytosis, and activation & recruitment of other cells via cytokines and growth factors. For this role, macrophages are considered the* ***most essential cells*** *required in wound healing.*
3. ***Fibroblasts*** *are recruited to wound site during the* ***proliferation phase (days 4-12)*** *which proliferates and then activates for matrix synthesis and remodeling.*

Answers:

61.a. Finger or toe ...	62.d. Pseudomonas	63.d. Bronchiectasis
64.c. Putamen	65.a. First	66.a. Adenosine
67.c. 13	68.a. Lumbar puncture	69.a. Carbuncle
70.c. Mammography and FNAC	71.b. Percutaneous drainage of abscess	72.a. Serum ALP
73.a. Gallstone	74.a. 17 or 22	75.c. Macrophages

Pediatrics

76. Index of severity of malnutrition is best assessed by:

a. Weight for height b. Height for age
c. Height for weight d. Weight for age

- *Index of acute malnutrition: weight for height.*
- *Index of chronic malnutrition: height for age.*

77. Which of the following is correct?

a. Pubarche→Thelarche→Menarche
b. Adrenarche→Menarche→Thelarche
c. Thelarche→Pubarche→Menarche
d. Menarche→Thelarche→Pubarche

- *At approximately age 10 to 12 years, breast budding termed as thelarche is the first physical sign in 90% of girls. In girls the sequence of development of puberty is (Mnemonic: BPH in males).*

  B = Breast development ***(Thelarche)***

  P = Pubic hair development ***(Pubarche)***

*H = Height increases; peak grown velocity attained – **growth spurt***
*In males = Menstruation starts (**Meharche**)*
(Axillary hair develop after menstruation starts.)

78. A child stands with support and speaks few bi-syllables at:
a. 12 months b. 18 months
c. 6 months d. 9 months

79. A neonate develops jaundice within first 18 hours of life. Which of the following is unlikely?
a. ABO incompatibility
b. Rh incompatibility
c. Physiological jaundice
d. Hemolytic jaundice

80. A 10 year old girl has short stature, webbed neck and lymphedema of dorsum of hand and feet. What is the most likely diagnosis?
a. Klinefelter's syndrome
b. Patau syndrome
c. Edward syndrome
d. Turner's syndrome

81. A child of 4 years has hepatomegaly, edema of legs and feet, coarse hair. He is likely suffering from:
a. Marasmus b. Kwashiorkor
c. Elephentiasis d. Beriberi

82. Which is the commonest cyanotic congenital heart disease?
a. VSD b. ASD
c. TOF d. PDA

☞ *VSD and ASD are acyanotic heart diseases.*

83. A child has facial puffiness, ascites but no RBC in urine. He is most like suffering from:
a. Nephritic syndrome
b. Nephrotic syndrome
c. Polycystic kidney disease
d. Acute Renal Failure

☞ *Hematuria and hypertension point towards nephritic syndrome.*

84. Diarrhea in infants is most commonly caused by:
a. Pneumococcus b. Rotavirus
c. Salmonella d. Shigella

85. Child doubles the height at the age of years.
a. 5 ½ b. 4½
c. 3½ d. 2

86. What is the treatment of choice in aplastic anemia?
a. Blood transfusion
b. Bone marrow transplantation
c. Corticosteroid
d. Immunosuppressant

87. A 9 year boy presents to your clinic with rapid onset of puffiness around the eyes and pedal edema. On further questioning, the mother says he had history of sore throat some 3 weeks back and is passing cola colored urine. What is the probable diagnosis?
a. Nephrotic syndrome
b. Nephritic syndrome
c. Hemolytic uremic syndrome
d. UTI

88. What is the commonest childhood tumor amongst the following?
a. CLL b. AML
c. CML d. ALL

Acute lymphoblastic leukemia.

Gynecology and obstetrics

89. What is the most common cause of PPH?
a. Trauma b. Bleeding disorder
c. Atonicity d. Retained placenta

90. A patient presents to emergency with the history of APH. What should not be done?
a. Abdominal examinations
b. Send for USG
c. P/V examination
d. Blood transfusion

☞ *Any bleeding through or into the genital tract that occurs after 28 weeks and before birth of baby is called as antepartum hemorrhage. Per-vaginal examination in OPD set up may worsen the status by provoking the concealed hemorrhages or by eroding the bleeding mucosa. Hence it should only be done in OT table with preparation.*

Answers:

76.a.	Weight for height	77.c.	Thelarche → Pubarche → Menarche	78.d.	9 months
79.c.	Physiological jaundice	80.d.	Turner's syndrome	81.b.	Kwashiorkor
82.c.	TOF	83.b.	Nephrotic syndrome	84.b.	Rotavirus
85.b.	4½	86.b.	Bone marrow transplantation	87.b.	Nephritic syndrome
88.d.	ALL	89.c.	Atonicity	90.c.	P/V examination

91. **A primi at 8 weeks of pregnancy comes to obstetrics OPD with the history of bleeding and passage of grape like mass pervaginum. What is the most likely diagnosis?**
   a. Incomplete abortion
   b. Complete abortion
   c. Ectopic pregnancy
   d. Hydatiform mole

92. **A 2nd gravida in full term pregnancy has cervix 9 cm dilated, station +1. What is the best management plan?**
   a. Vacuum delivery b. Forceps delivery
   c. Wait and watch d. Caesarian section

93. **What is the stage of carcinoma cervix that extends beyond the cervix into lateral pelvic wall?**
   a. Stage I b. Stage II
   c. Stage III d. Stage IV

94. **What is the commonest cause of retention of urine in pregnancy?**
   a. Retroverted Gravid uterus
   b. UTI
   c. Urethral stenosis
   d. Urethral stone

95. **Which of the following is the most common type of fibroid?**
   a. Intramural b. Subserosal
   c. Submucosal d. Cervical

96. **What is the contraceptive of choice for a newly married couple?**
   a. OCP b. Depo-provera
   c. Femidom d. IUCD

97. **A 29 year obese female has hirsutism. She also has problem of oligomenorrhea. What is the most likely diagnosis?**
   a. PCOD
   b. Turner syndrome
   c. Asherman's syndrome
   d. Normal

98. **A 15 year old girl has primary amenorrhea, cyclical pain and bulged perineum. What is the most likely diagnosis?**
   a. Cryptomenorrhea b. Uterine fibroid
   c. Septate uterus d. Cervical stenosis

   ☞ *Cervical stenosis is the acquired cause of cryptomenorrhea which occurs following amputation, conizationor cauterization. There is usually secondary amenorrhea.*

   ☞ *Imperforate hymen is the most common congenital cause of crytomenorrhea in which primary amenorrhea is present.*

Medical Termination of Pregnancy.

99. **Which of the following is not used for MTP?**
   a. Mifepristone b. Methotrexate
   c. Misoprostol d. Atosiban

   ☞ *Atosiban is an inhibitor of the hormones oxytocin and vasopressin. It is used as an intravenous medication as a labour repressant (tocolytic) to halt premature labor.*

100. **All are positive signs of pregnancy except:**
   a. Amenorrhea
   b. Perception of active fetal movements
   c. Auscultation of fetal heart sound
   d. USG evidence of fetus in uterus

Orthopedics

101. **A 24 year old man had RTA where he had posterior dislocation of hip joint. What will the attiitude of the limb?**
   a. Flexion, abduction and external rotation
   b. Extension, abduction and external rotation
   c. Flexion, adduction and internal rotation
   d. Extension, adduction and external rotation

   Attitude of limb in various orthopedic disorders
   ☞ *Synovitis: Flexion, abduction, external rotation and apparent lengthening*
   ☞ *Arthritis & Posterior dislocation of hip: Flexion, adduction, internal rotation and true shortening*
   ☞ *Anterior dislocation of hip: Flexion, external rotation and hyperabduction and true lengthening*
   ☞ *Fracture neck of femur: External rotation and shortening of leg (<1 inch)*
   ☞ *Intertrochanteric fracture: Marked externally rotated and shortened leg (>1 inch)*

102. **Which nerve injury causes wrist drop?**
   a. Ulnar b. Radial
   c. Median d. Axillary

103. **A 30 year male has swelling and vague pain in the knee joint. The X-ray shows soap bubble appearance in the epiphyseal region of lower end of femur. What is your diagnosis?**
   a. Bone cyst
   b. Giant cell tumor
   c. Osteosarcoma
   d. Aneurysm of bone

GCT is the osteolytic tumor arising from the epiphysis. It is common young adults and is locally malignant. Common sites are lower end of femur, upper end of tibia and fibula and distal end of the radius.

104. What is the commonest benign bone tumor?

a. Osteochondroma b. Chondrosarcoma
c. Multiple myeloma d. Osteosarcoma

105. Serum ALP is increased in all except:

a. Paget's disease
b. Osteomalacia
c. Immediately after fracture
d. Multiple myeloma

Answers:

91.d. Hydatiform mole	92.a. Vacuum delivery	93.c. Stage III
94.a. Retroverted Gravid uterus	95.a. Intramural	96.a. OCP
97.a. PCOD	98.a. Cryptomenorrhea	99.d. Atosiban
100.a. Amenorrhea	101.c. Flexion, adduction ..	102.b. Radial
103.b. Giant cell tumor	104.a. Osteochondroma	105.d. Multiple myeloma

106. A child is brought to the hospital with a history of fall on outstretched hand followed by pain, swelling, deformity and inability to move the affected elbow. Which is the most common artery injured in such injuries?

a. Radial b. Brachial
c. Ulnar d. Axillary

not nerve

Supracondylar fracture of humerus is very common in children when there is fall on outstretched hand. Extension type is common than flexion type. Relationship between three bony points is maintained which helps to differentiate it from other injuries around the elbow. Blood vessel injury is very common immediate complication of this fracture, in which brachial artery is injured.

107. In anterior dislocation of shoulder, the nerve involved is:

a. Musculocutaneous
b. Axillary
c. Radial
d. Ulnar

ENT

Chronic suppurative otitis media (CSOM)

108. What is the unsafe type of CSOM?

a. Atticoantral b. Tubotympanic
c. Both are safe d. Both are unsafe

109. A young female has anosmia, foul smelling discharge from the nose and large crusts filling the nose. She is suffering from:

a. Rhinitis sicca b. Atrophic rhinitis
c. Chronic rhinitis d. Irritative rhinitis

110. Most common site of carcinoma tongue is:

a. Lateral border of anterior 2/3rdof tongue
b. Posterior 1/3rdof tongue
c. Anterior 2/3rdof tongue
d. lateral border of posterior 1/3rdof tongue

111. After 10 hours of radical thyroidectomy, patient gasps. What should be done?

a. Laryngoscopy and intubation
b. Tracheostomy
c. LMA
d. Suture removal

The most common cause of gasping after radical thyroidectomy is laryngeal edema which in turn is mostly due to tension hematoma. So suture removal should be done first in such case. If this does not help, intubation should be done.

112. A child has an elongated face, dull expression, open mouth, prominent and crowded upper teeth and hitched up upper lip. He is likely suffering from:

a. Chromosomal disorder
b. Adenoid hyperplasia
c. Hyperthyroidism
d. Thalassemia

113. Nasopharyngeal carcinoma is most commonly associated with:

a. Ebstein-Barr virus
b. Bartnella infection
c. Fungal infection
d. Recurrent bacterial infection

Ophthalmology

114. A patient presented with acute red eye, pain, photophobia and diminution of vision. The most likely diagnosis is:

a. Acute conjunctivitis
b. Acute iridocyclitis

106.b. Brachial	107.b. Axillary	108.a. Atticoantral
109.b. Atrophic rhinitis	110.a. Lateral border ...	111.d. Suture removal
112.b. Adenoid hyperplasia	113.a. Ebstein-Barr virus	114.b. Acute iridocyclitis

c. Acute congestive glaucoma
d. Chemical injury to the eye

115. A 54 years old man presented with acute onset headache, vomiting and red eye. Most likely diagnosis is:
a. Acute iridocyclitis
b. Acute congestive glaucoma
c. Chronic glaucoma
d. Migraine headache

116. A 22 year male presented with inability to see far objects. He uses -1.5 D lens to see distant objects. He is likely to have:
a. Myopia b. Hypermetropia
c. Presbyopia d. Astigmatism

117. What should be done first in case of chemical injury to eye?
a. Neutralize acid with base
b. Neutralize alkali with acid
c. Wash with copious amount of water
d. Put antibiotic eye drops as soon as possible

118. In myopia, the rays from infinity converse at:
a. Retina b. In front of retina
c. Behind retina d. Infinity

119. Diabetic cataract is due to accumulation of ..... in lens.
a. Sorbitol b. Copper
c. Fructose d. Glucose

120. Single drug used for the treatment of trachoma is:
a. Tetracycline b. Doxycycline
c. Azithromycin d. Chloramphenicol

Answers:

106.b. Brachial	107.b. Axillary	108.a. Atticoantral
109.b. Atrophic rhinitis	110.a. Lateral border ...	111.d. Suture removal
112.b. Adenoid hyperplasia	113.a. Ebstein-Barr virus	114.b. Acute iridocyclitis
115.b. Acute congestive glaucoma	116.a. Myopia	117.c. Wash with copious ..
118.b. In front of retina	119.a. Sorbitol	120.c. Azithromycin

121. Anterior uveitis is commonly associated with:
a. Psoriasis
b. Reactive arthritis
c. Ankylosing spondylitis
d. All of the above

Anesthesia

larvngeal mask

122. The advantage of LMA over Bag and Mask ventilation is that it can be used in:
a. Full stomach patient
b. Hiatus hernia
c. Pregnancy
d. Cervical injuries

123. The anesthetic agent contraindicated in hypertension is:
a. Propofol b. Ketamine
c. Thiopentone d. Diazepam

Contraindication to use of ketamine
1. *Head injury and Raised ICP*
2. *Hypertension& hyperthyroidism*
3. *IHD*
4. *Psychiatric patients*
5. *Ophthalmic surgery*
6. *Vascular aneurysm.*

Disease /state	Contraindicated	Best to use/DOC
1. ***Asthmatics***	*Thiopentone*	*Ketamine, Sevofurance*
2. ***Raised ICP***	*Ketamine*	*Propofol, thiopentone*
3. ***Hypertension***	*Ketamine*	*Thiopentone*
4. ***Hypotensive, shock***	*Thiopentone*	*Ketamine*
5. ***ECT***	-	*Methohexitone*
6. ***Malignant hypertension***	-	*Propofol*
7. ***Children***	-	*Sevoflurane, ketamine*
8. ***Psychiatric patient***	*Ketamine*	*Propofol, Thiopentone*
9. ***Porphyria***	*Thiopentone*	*Ketamine, Propofol*

Dermatology

124. Fungal infections are treated by:
a. Azithromycin b. Targocid
c. Neosporin d. Griseofulvin

125. False about scabies:
a. Burrow found on the edges of fingers, toes or sides of hands and feet
b. Family history
c. Ivermectin (200 mcg/kg) single dose is first line of treatment
d. Permethrin can be used in treatment

121.d. All of the above	122.d. Cervical injuries	123.b. Ketamine	124.d. Griseofulvin	125.c. Ivermectin (200 mcg/kg) ..

126. **Pseudoisomorphic phenomenon is seen in:**
a. Psoriasis b. Lichen planus
c. Vitiligo d. Plane warts

☞ ***Isomorphic phenomenon (Koebner phenomenon)*** *is a phenomenon in which new lesions appear at the site of injury due to pressure or scratching. It is seen in conditions like* ***psoriasis, vitiligo, lichen planus,*** *lichen niditus, pityriasisrubra pilaris and keratosis follicularis.*

☞ ***Pseudo-isomorphic phenomenon*** *is seen characterized by the appearance of similar skin lesions at the site of injury in infective lesion like* ***pane warts (verruca vulgaris), molluscumcontagiosum*** *andtoxicodendron dermatitis. It occurs due to spread of infective agent (virus) to new site.*

Psychiatry

127. **A patient is talkative and active, sleeps less, gives speech that he can change Nepal's future. He is likely to be suffering from:**
a. Schizophrenia b. OCD
c. Mania d. Depression

128. **Which of the following is not a Schneider's first rank symptom?**
a. Audible thoughts
b. Made impulses
c. Delusional perception
d. Affect disturbances

129. **An 18 year girl has abnormal body movements for about 8-10 minutes time and again. During the episode, she has avoidant gaze with eyes open and she mutters. She is likely having:**
a. Seizure disorder
b. Dissociative convulsion
c. Focal seizure
d. None of the above

130. **"Sun downing phenomenon" is seen in:**
a. Schizophrenia b. Mania
c. Delirium d. Depression

☞ *Diurnal variation is marked in delirium, usually with worsening of symptoms in the evening and night. This phenomenon is called as 'sun downing'.*

Comprehensive Structured Questions

A. **A 12 kg child presented to your clinic with restlessness and irritability, sunken eyes and he looks thirsty and drinks eagerly and on pinching his skin, it goes back to normal position slowly.**

131. **What is the degree of dehydration in this patient?**
a. No dehydration
b. Some dehydration
c. Severe dehydration
d. Very severe dehydration

132. **Which plan would you go for in this patient?**
a. Plan A b. Plan B
c. Plan C d. Neither of above

133. **What is the amount of maintenance fluid required for rehydration in first 4 hour in this patient?**
a. 900 ml b. 1000 ml
c. 800 ml d. 700 ml

☞ *In some dehydration fluid needed for rehydration is* ***75 ml/kg.***

134. **In this case, the stool of child contains mucus but not blood and stool has rice water appearance. What is the etiology of diarrhea?**
a. Vibrio cholera b. Shigella
c. Salmonella d. Rotavirus

135. **Which of the following can be used for treatment in this case?**
a. Metronidazole b. Cotrimoxazole
c. Tinidazole d. Fluconazole

Answers:

121.d. All of the above	122.d. Cervical injuries	123.b. Ketamine
124.d. Griseofulvin	125.c. Ivermectin (200 mcg/kg) ..	126.d. Plane warts
127.c. Mania	128.d. Affect disturbances	129.b. Dissociative convulsion
130.c. Delirium	131.b. Some dehydration	132.b. Plan B
133.a. 900 ml	134.a. Vibrio cholera	135.b. Cotrimoxazole

B. **A 45 year old woman has pain in bilateral knee joints, metacarpophalangeal joints of hand and wrist joint for 7 weeks.**

136. **What is the most likely diagnosis?**
a. OA b. Gout
c. RA d. Ankylosing spondylitis

☞ *OA classically involves DIP joint, PIP joint and 1st carpometacarpal joint (base of thumb) of hand with* ***sparing of MCP and wrist joint.*** *Commonly affected joint in RA*

Common

☞ *MP joints of hand (particularly index finger)*

136.c. RA

- *PIP joints of fingers (**sparing of DIP joints**)*
- *Wrist, knees, elbow, ankles*

Less common

- *Hip joint*
- *TMJ*

Uncommon

- *Atlanto axial joint*
- *Facet joints of cervical spine*

139.a

137. Which of the following is the investigation of choice for diagnosis?

a. RA factor b. Blood uric acid
c. Anti CCP d. Any of the above

138. Which of the following joint is least common in this disorder?

a. Atlantoaxial b. DIP joints of fingers
c. PIP joints of fingers d. MP joint

139. Which of the following drug doesn't alter the disease course?

a. Indomethacin
b. Methotrexate
c. Sulfasalazine
d. Hydroxychloroquine

140. The women after few months came with handful of medicines which she took during pain. She has bruises in hand, facial puffiness. What those pills could be?

a. D-penicillamine b. Sulfasalazine
c. Corticosteroids d. Methotrexate

C. A 46 year old known alcoholic presented with pain in dorso-lumbar spine. On examination, there is tenderness at dorso-lumbar spine. The X-ray of the same region shows destruction of the 12thdorsal vertebrae with loss of disc space between D_{12} and L_1.

141. What is the most likely diagnosis?

a. Skeletal TB b. Multiple myeloma
c. Metastasis d. Missed fracture

142. Which is the most common site of bone?

140.c. Corticosteroids

a. Spine b. Knee joint
c. Hip joint d. Shoulder joint

143. Which is the most common site of TB spine?

a. D 12-L 1 b. LS-L1
c. C1-C2 d. S2-S3

144. Which is the earliest X-ray finding in TB spine?

141.a. Skeletal TB

a. Reduction of disc space
b. Accumulation of pus
c. Erosion of vertebral bodies
d. Compression fracture

X-ray features of bone in TB of bone

- *Loss of curvature of spine due to paravertebral spasm is the earliest X-ray feature*
- *Decreased joint space (decrease IVD space – next radiological feature)*
- *Destruction of vertebral body/fusion (bony ankylosis)*
- *Kyphosis or angular kyphosis: COBB's angle in lateral view*
- *Diffuse rarefaction of the vertebrae above and below the lesion*

145. The most common sequele of TB spondylitis in adolescents is:

a. Fibrous ankylosis
b. Bony ankylosis
c. Pathological dislocation
d. Chronic osteomyelitis

- ***Ankylosis** is the pathological fusion of bones in a joint leading to stiffness of that joint. It may be*

1. ***Fibrous ankylosis:** Two articular surfaces are fused by fibrous tissue*
   Some movement of joint is possible (though just a jog of movement)
   Movements are painful
   Most common causes are TB hip and knee
2. ***Bony ankylosis:** There is bony union between two articular surfaces.*
   No movement is possible
   Joint is painless
   Most common cause is acute suppurative arthritis > TB spine

D. A 36 year old married infertile woman for 10 years with 6 weeks of amenorrhea presents to ER with severe pain abdomen, bleeding PV and sweating?

146. What is the most likely diagnosis?

a. Ectopic pregnancy
b. Abortion
c. PID
d. DUB

147. What is the most common site of tubal ectopic?

a. Isthmus b. Ampulla
c. Infundibulum d. Interstitium

PART-19

142.a. Spine | 143.a. D12-L1 | 144.a. Reduction of disc space

145.b

148. What is the principle of management of this case?

a. Resuscitation
b. Laparotomy
c. Resuscitation and laparotomy
d. Resuscitation followed by laparotomy

The principle in the management of acute ectopic pregnancy is resuscitation and laparotomy and not resuscitation followed by laparotomy (Source: DC Dutta's textbook of obstetrics, 7th edition, page 184).

149. Which of the following drug is used in ectopic?

a. Methotrexate b. KCl
c. $PGF_{2\alpha}$ d. All of the above

150. What is the chance of recurrence of ectopic in this female?

a. 1 in 10 b. 1 in 20
c. 1 in 100 d. 1 in 200

Answers:

136.c. RA	137.c. Anti CCP	138.b. DIP joints of fingers
139.a. Indomethacin	140.c. Corticosteroids	141.a. Skeletal TB
142.a. Spine	143.a. D12-L1	144.a. Reduction of disc space
145.b. Bony ankylosis	146.a. Ectopic pregnancy	147.b. Ampulla
148.c. Resuscitation and laparotomy	149.d. All of the above	150.a. 1 in 10

E. A female in 36 weeks of pregnancy with internal OS closed has leg swelling. Dipstick protein is 3+ and BP is 160/100 mmHg.

151. What is your diagnosis?

a. Pre-eclampsia in labour
b. Severe pre-eclampsia not in labour
c. Eclampsia in labour
d. Eclampsia not in labour

152. What is the most common complication?

a. APH b. PPH
c. Eclampsia d. Obstructed labour

153. What is its bio-chemical marker?

a. Blood urea b. Serum uric acid
c. Serum creatinine d. SGOT

154. This patient, following delivery bleeds too much. What is the most common cause?

a. Atonicity
b. Trauma
c. Deranged liver enzymes
d. Thrombocytopenia

155. In eclamptic patient, prophylactic intravenous ergometrine following the delivery of anterior shoulder:

a. Can be given if BP<160/110 mmHg
b. must be given
c. Should not be given
d. Depends on availability of other medicines

During labour, prophylactic intravenous ergometrine or syntome trine following the delivery of anterior shoulder should not be given as it may produce further rise of BP. Instead 10 units of oxytocin IM or IV slowly should be given. One should remain vigilant about PPH and shock (Source: DC Dutta's textbook of obstetrics, 7th edition, page236).

F. A 60 year old male presented with BPH.

156. Which of the following is true about prostrate?

a. Developmentally, prostrate has 4 lobes
b. Carcinoma arises from transitional zone
c. The prostrate develops around 12th week of intra-uterine life
d. Prostrate arterial plexus are present between the anatomical capsule and pelvic peritoneum.

157. Which lobe is involved in BPH?

a. Median lobe b. Anterior lobe
c. Posterior lobe d. Lateral lobe

158. Tamsulosin is:

a. α-blocker b. β-blocker
c. α-agonist d. β-agonist

Tamsulosin is an α-1 adrenergic receptor blocker in smooth muscles of prostate decreasing bladder neck and urethral resistance.

159. The surgical procedure of choice in BPH is:

a. TURP
b. Retropubic approach resection
c. Open prostatectomy
d. Perineal approach resection

160. Finasteride is:

a. 5α-reductase inhibitor
b. Oestrogen
c. Progesterone
d. PGF2α agonist

Answers:

151.b. Severe pre-eclampsia not in labour	152.c. Eclampsia	153.b. Serum uric acid
154.a. Atonicity	155.c. Should not be given	156.c. The prostrate develops ..
157.a. Median lobe	158.a. α-blocker	159.a. TURP
160.a. 5α-reductase inhibitor	161.d. Acne vulgaris	162.a. Comedones
163.d. Propionibacterium	164.d. Patient on isotretinoin ...	165.a. 0.025%,0.05%, 0.1%

G. A 15 year old girl has polymorphic eruption on the face characterized by papules, pustules, nodules, cyst and comedones on the greasy skin.

161. What is your diagnosis?

a. Rosacea
b. Seborrheic dermatitis
c. Miliaria
d. Acne vulgaris

162. What is the pathognomic lesion of above disease?

a. Comedones b. Papules
c. Pustules d. Nodules

163. Which of the following organism plays the major role in pathogenesis of this disease?

a. Malassezia b. Micrococci
c. S. epidermidis d. Propionibacterium

164. About isotretinoin, which is false?

a. Recommended in severe acne
b. Should not be used in pregnancy
c. LFT, lipid profile, CBC and pregnancy test should be done before starting the treatment
d. Patient on isotretinoin can donate blood

- *Patient on isotretinoin therapy should not donate blood during therapy and for 1 month after discontinuing treatment because of embryo-fetal toxicity risk.*
- *It is strongly contraindicated in females who are or may become pregnant (category 'X': Black box warning), because therapy poses an extremely high risk for severe birth defects with any dose or duration.*

165. Retinoic acid is available as:

a. 0.025%,0.05%, 0.1%
b. 0.5%, 1%
c. 1%, 2%,4%
d. 5%,10%,20%

Answers:

151.b. Severe pre-eclampsia not in labour	152.c. Eclampsia	153.b. Serum uric acid
154.a. Atonicity	155.c. Should not be given	156.c. The prostrate develops ..
157.a. Median lobe	158.a. α-blocker	159.a. TURP
160.a. 5α-reductase inhibitor	161.d. Acne vulgaris	162.a. Comedones
163.d. Propionibacterium	164.d. Patient on isotretinoin ...	165.a. 0.025%,0.05%, 0.1%

H. A 6 year child presents to you with edema first noticed around eyes serum subsequently on legs. On investigation you found hypoalbuminemia (serum albumin< 2.5 gm/dL).

166. What is the most likely diagnosis?

a. Nephrotic syndrome
b. Nephritic syndrome
c. HUS
d. IgA nephropathy

167. What is the most common cause of this disease in children?

a. Minimal change nephrotic syndrome
b. IgA nephropathy
c. MPGN
d. HUS

Steroid-sensitive minimal change disease is the most common nephrotic syndrome seen in children. Features are:

- *Proteinuria (>40 mg/m²/hour OR >1 g/ m²/day) [or urine protein : creatinine ratio ≥ 2000 mg/g, dipstick urine protein >3+]*
- *Hypoalbuminemia (<2.5 g/dL)*
- *Edema*
- *Hyperlipidemia (cholesterol >200 mg/dL; reactive to loss of protein)*
- *Increased susceptibility to infections and*
- *Hypercoagulability*

Source: Nelson textbook of pediatrics, 20th edition)

168. If you do light microscopic examination of renal biopsy in this case, what would be the finding?

a. Nothing
b. Loss of foot process
c. Tubule atrophy
d. Crescents

- *In minimal change nephrotic syndrome (MCNS) (approximately 85% of total cases of nephrotic syndrome in children), the glomeruli appear normal or show a minimal increase in mesangial cells and matrix.*
- *Findings on immunofluorescence microscopy are typically negative, and electron microscopy simply reveals effacement/loss of the epithelial cell foot processes. More than 95% of children with minimal change disease respond to corticosteroid therapy.*

Source: Nelson textbook of pediatrics, 20th edition)

169. What is the treatment protocol in this patient?

a. Prednisolone 60 mg/m² daily for 4 weeks followed by 40 mg/m² on alternate days for 4 weeks
b. Prednisolone 40 mg/m² daily for 6 weeks followed by 60 mg/m² on alternate days for 4 weeks
c. Prednisolone 60 mg/m² daily for 4 weeks followed by 40 mg/m² on alternate days for 6 weeks
d. Prednisolone 60 mg/m² daily for 6 weeks followed by 40 mg/m² on alternate days for 6 weeks

- *The older version of corticosteroid therapy includes prednisolone 60 mg/m²/day in 3 divided doses for 4 weeks, followed by 40 mg/m² on alternate days for next 4 weeks, after which the treatment is daily dose of 60 mg/m² /day or 2 mg/kg/day to a maximum of 60 mg daily for 4-6 weeks followed by alternate-day prednisone (starting at 40 mg/m² qod or 1.5 mg/kg qod) for a period ranging from 8 weeks to 5 months, with tapering of the dosewith a minimum total duration of treatment of 12 weeks. (Source: Nelson textbook of pediatrics, 20th edition)*

Answers:

166.a. Nephrotic syndrome	167.a. Minimal change nephrotic syndrome	168.a. Nothing
169.d. Prednisolone 60 mg/m² daily	170.b. Steroid resistance	171.b. Extra dural
172.b. Middle meningeal artery	173.c. 9	174.b. Extra dural
175.d. 3-8	176.b. Stage I	177.d. ACE inhibitor
178.d. Angiotensin receptor blocker	179.a. Calcium channel blocker	180.d. ACE inhibitor

170. If the child doesn't go into remission by the end of 4 weeks of daily therapy, the disease is regarded as:

a. Steroid dependence
b. Steroid resistance
c. Disease relapse
d. Your diagnosis is wrong

- *Approximately 80-90% of children respond to steroid therapy.*
- ***Response** is defined as the attainment of remission within theinitial 4 week of corticosteroid therapy.*
- ***Remission** consists of a urineprotein: creatinine ratio of <0.2 or <1+ protein on urine dipstick (urine protein nil or trace) for3 consecutive days.*
- *The vast majority of children who respond toprednisone therapy do so within the first 5 week (by first 4 weeks in 95% of cases) of treatment.*
- ***Steroid sensitive NS:** These are the cases which respond to steroids and undergo into remission.*
- ***Relapse of Nephrotic Syndrome.** Relapse of nephroticsyndrome is defined as a urine protein : creatinine ratio of >2 or ≥3+protein on urine dipstick testing for 3 consecutive days.*
- ***Infrequent relapsing NS:** < 2 relapse in initial 6 months or less < 4 relapses in any 12 months period.*
- ***Frequent relapsing NS:** 2 or more relapses in initial 6 months or 4 or more relapses in any 12 months period.*
- ***Steroid dependence NS:** 2 consecutive relapses while on alternate day steroids or within 14 days of stoppage of steroids*
- ***Steroid resistance** is defined as the failureto achieve remission despite on steroid therapy at a dose of60 mg/m2/dayor 2 mg/kg/day for 4 weeks of prednisolone followedby 3 intravenous pulses of methyl-prednisolone in children (Nelson's textbook of pediatrics, 20th edition definessteroid resistanceas the failureto achieve remission after 8 weeks of corticosteroid therapy.)*

I. A patient presents with history of RTA to your clinic. The x-ray done shows associated fracture of skull bone and CT scan shows biconvex shaped haematoma. On neurological assessment he opens eye to pain, speaks inappropriate words and withdraws to pain.

171. What is the type of Haemorrhage?

a. Intracerebral b. Extradural
c. Subdural d. Pontine

172. Which artery is most commonly injured in this type of haematoma?

a. Anterior cerebral artery
b. Middle meningeal artery
c. Middle cerebral artery
d. Posterior cerebral artery

173. What will be the GCS of above patient?

a. 7 b. 8
c. 9 d. 10

174. Lucid interval is classical of:

a. Intracerebral b. Extradural
c. Subdural d. Pontine

175. Head injury is defined as severe if GCS is:

a. 0-5 b. 5-7
c. 7-10 d. 3-8

J. A 40 year male has BP of 150/95 mmHg.

176. What is the staging of HTN in this case?

a. Prehypertension b. Stage I
c. Stage 11 d. Stage III

Classification	Systolic BP (mmHg)	Diastolic BP (mmHg)
Normal	< 120	And < 80
Prehypertension	120 – 139	Or 80 – 90
Stage 1 HTN	140 – 159	Or 90 – 99
Stage 2 HTN	≥ 160	Or ≥ 100
Isolated systolic HTN	≥ 140	And < 90

177. Which group of anti-hypertensive do you prefer for hypertensive patient with DM?

a. Calcium channel blocker
b. α-blocker
c. β-blocker
d. ACE inhibitor

ACE inhibitors

- *Indications: DM with HTN, Heart failure or LV dysfunction, previous MI, diabetic/other nephropathy/proteinuria, Diastolic HTN, Gout, fatty liver disease, metabolic disease*
- *Contraindications: Pregnancy, bilateral renal artery stenosis, renal impairment i.e. rising urea/ creatinine (but can be given in stable high creatinine level) hyperkalemia*

ARBs

- *Indications: **ACE inhibitor-associated cough**, diabetic/ other nephropathy, congestive heart failure*
- *Contraindications: Pregnancy, Bilateral renal artery stenosis, hyperkalemia*

178. Telmisartan is:

a. Calcium channel blocker
b. α-blocker
c. β-blocker
d. Angiotensin receptor blocker

179. The treatment of choice for isolated systolic hypertension is:

a. Calcium channel blocker
b. α-blocker
c. β-blocker
d. Angiotensin receptor blocker

Calcium channel blockers

- *Indications: Advanced age, isolated systolic hypertension, cyclosporine-induced hypertension, HTN with vasospastic angina, PVD, Add on therapy, CKD*
- *Contraindications: Heart block (verapamil, diltiazem), acute MI, severe bradycardia*

180. Which of following drug is absolutely contra-indicated in bilateral renal artery stenosis?

a. Calcium channel blocker
b. α- blocker
c. β- blocker
d. ACE inhibitor

Answers:

166.a. Nephrotic syndrome	167.a. Minimal change nephrotic syndrome	168.a. Nothing
169.d. Prednisolone 60 mg/m² daily	170.b. Steroid resistance	171.b. Extra dural
172.b. Middle meningeal artery	173.c. 9	174.b. Extra dural
175.d. 3-8	176.b. Stage I	177.d. ACE inhibitor
178.d. Angiotensin receptor blocker	179.a. Calcium channel blocker	180.d. ACE inhibitor

NMCLE - SHRAWAN 2070

Anatomy

1. Which nerve is present in tracheo-esophageal groove?
a. Vagus
b. Recurrent Laryngeal Nerve
c. Superior Laryngeal
d. External Laryngeal

2. Chief flexor of hip is
a. Ilio-Psoas b. Rectus femoris
c. Gluteus maximus d. Sartorious

Flexor of the Hip joint:
1. *Iliacus*
2. *Psoas major*

Extensor of the Hip joint:
1. *Hamstrings*
2. *Gluteus Maximus*

- *Most powerful extensor of the hip joints.*
- *Action: climbing stairs, standing from sitting position*
- *Paralysis leads to Gower's sign i.e Pt climb on itself*

3. Which of these does not come in the porta hepatis?
a. Hepatic artery
b. Portal vein
c. Bile duct
d. Common Hepatic duct

Porta Hepatis:
- *Is a transverse fissure, about 5 cm long, present on inferior surface of liver between caudate lobe (inferiorly) and quadrate lobe (superiorly).*
- *Structures passing (Anterior to posterior Duct, Artery, Vein respectively):*
  - *Common Hepatic duct*
  - *Hepatic artery proper*
  - *Hepatic portal vein*
  - *Hepatic nerve*
  - *Lymph vessels*

Physiology

4. Which is responsible for enzymatic secretion of pancreas?
a. CCK Cholecystokinin b. Secretin
c. Gastrin d. LDH Lactate dehydrogenase

5. Which of the following is true regarding contraction of heart chambers?
a. Contraction of both ventricle at same time
b. Right ventricle precedes left ventricle
c. Left ventricle precedes right ventricle
d. Right ventricle precedes right atria

- *Sequence of contraction of heart chambers: both atria followed by both ventricles.*

Pathology

6. A 35 year has cervical LN enlargement. His FNAC shows caseous necrosis. It is most probably:
a. TB lymphadenitis
b. Chronic lymphadenitis
c. Metastatic lymphadenopathy
d. Abscess

7. Most common cause of acute nephritis is :
a. Streptococcus epidermidis
b. Group A beta streptococci
c. Staphylococci
d. E. coli

- *(**Reference:** Goljan Pathology 1st South Asia edition, page no 513, table no 20.7)*

Pharmacology

8. Uterine receptor is?
a. Alpha 1 b. Alpha 2
c. Beta I d. Beta 2

***Sympathetic receptors:** sites and action:*

α -receptors		β -receptors	
α_1	α_2	β_1	β_2
• *blood vessel:* ***VC*** • *eye:* ***mydriasis*** • *prostatic urethra:* ***↓urine output***	*presynaptic*	• *heart:* ***stimulates*** • *JG cells:* ***activates RAS, release renin***	• *lungs :* ***relaxes*** • *GIT :* ***constipation*** • *Bladder:* ***↓UO*** • *Uterus :* ***tocolytic effect (preterm** labour)* • *Blood vessel:* ***VD*** • *Skeletal muscle:* ***in muscle spindle; causes tremor*** • *liver*

1.b. Recurrent Laryngeal Nerve | 2.a. Ilio-Psoas | 3.c. Bile duct | 4.a. CCK | 5.a. Contraction of both ... | 6.a. TB lymphadenitis | 7.b. Group A beta streptococci | 8.d. Beta 2

9. **Regarding clofazimine which of the followings is false?**
   a. It is phenyl iminophenazine
   b. Half life is 70 hrs
   c. Should be taken in empty stomach
   d. None of the above

   ☞ *Clofazimine has a biological half-life of about 70 days.*

10. **Which of the following NSAID has headache as a side effect?**
   a. Ibuprofen b. Paracetamol
   c. Piroxicam d. Mefenamic acid

11. **Benzodiazepam acts by:**
   a. Facilitating GABA receptor
   b. Inhibiting GABA receptor
   c. Modulating μ Receptor
   d. GABA mimetic activity

12. **An elderly male taking oral anti-hypertensive drug developed positive Direct Coombs Test. It may be due to:**
   a. Methyldopa b. Labetalol
   c. Clonidine d. Captopril

   ☞ *Methyldopa is known to cause the production of autoantibodies against red blood cells (RBCs), leading to a positive direct antiglobulin/Coombs test (DAT) and hemolytic anemia. In about 20% of patients taking methyldopa, IgG autoanti bodies develop against RBCs. However, most of the patients do not have hemolysis. A small percentage of such DAT-positive patients, about 2% of those taking methyldopa, develop an autoimmune hemolytic anemia (AIHA).*

Biochemistry

13. **Most important electrolyte to maintain ECF osmolarity?**
   a. Na + b. K+
   c. Ca++ d. Cl

14. **Which of the following organ has no parasympathetic supply?**
   a. Brain b. Spleen
   c. Skin d. Heart

   ☞ *The skin, which has no parasympathetic supply, contains cholinergic fibers (sweat glands) and adrenergic fibers (blood vessels) from the sympathetic.*

15. **Which of the following organ has no receptor for glucose uptake?**
   a. Liver b. RBC
   c. Adrenal Medulla d. Skeletal Muscle

   ☞ *Insulin-independent glucose uptake (@**BRICK L**) = **B**rain, **R**BCs, **I**ntestine, **C**ornea, **K**idney, **L**iver.*
   ***Note:** Go through the notes on glucose transport into cell and GLUT receptors in the review notes of Biochemistry*

Answers:

1.b. Recurrent Laryngeal Nerve	2.a. Ilio-Psoas	3.c. Bile duct
4.a. CCK	5.a. Contraction of both ...	6.a. TB lymphadenitis
7.b. Group A beta streptococci	8.d. Beta 2	9.b. Half life is 70 hrs
10.c. Piroxicam	11.a. Facilitating GABA receptor	12a. Methyldopa
13.a. Na +	14.c. Skin	15.b. RBC

Microbiology

16. **A patient's blood culture shows green colonies with positive optochin test sensitivity who has orbital cellulitis. Most likely organism is?**
   a. Pneumococcus b. Pseudomonas
   c. Staphylococcus d. E. coli

   Pneumococcus
   ☞ *Lanceolate (flame shaped), capsulated bacteria.*
   ☞ *Carom-coin appearance of colony (Draughtsman like colony)*
   ☞ *Bile solubility, Inulin fermentation and Optochin sensitivity: POSITIVE*
   ☞ *Shows Quellung reaction: Capsular delineation*

17. **A patient with AIDS develops headache, neck rigidity. CSF examination can be alternatively done with:**
   a. Giemsa stain b. Methylene blue
   c. India ink d. 10% KOH

   ☞ *In a HIV positive patient, Cryptococcus neoformans is common opportunistic organism to cause meningitis. It is stained by India ink stain which enhances the capsule that helps in identification of Cryptococcus neoformans.*

18. **A person comes in emergency with complain of diarrhea and vomiting for last 2 hour. He has taken food last night. Food poisoning with above symptoms after 24 hours is caused by**
   a. Staphylococcus b. Salmonella
   c. C.perfringens d. B.cereus

   ☞ ***Note:** Go through the notes for food poisoning in the review notes section of Microbiology*

19. **In PSGN, which type of hypersensitivity reaction is seen?**
   a. Type I b. Type II
   c. Type III d. Delayed

> ☞ ***Immune complex (type III) hypersensitivity:*** *Systemic lupus erythematous (SLE), Post-streptococcal glomerulonephritis (PSGN), Arthus reaction, Serum sickness, Polyarteritis nodosa (PAN).*
>
> ☞ ***Note:*** *go through the table for examples of various types of hypersensitivity in the review notes section of Microbiology*

20. **Which of the following is the most dangerous during pregnancy?**
   a. Hep A b. Hep B
   c. Hep C d. Hep E

> ☞ ***Note:*** *Go through the table for hepatitis viruses in the review notes section of Microbiology*

Community Medicine

21. **Diseases in Millennium Development Goal are:**
   a. Malaria, TB, Typhoid
   b. Measles, TB, Malaria
   c. AIDS, TB, Malaria
   d. AIDS, TB, Measles

> ☞ *The first challenge of Millennium Development Goal is to strengthen health systems. Without more efficient and equitable health systems, countries will not be able to scale up the disease prevention and control programs required to meet the specific health goals of reducing child and maternal mortality and rolling back HIV/AIDS, TB, and malaria.* MAT

22. **Ability to find true positive in the population is known as:**
   a. Sensitivity
   b. Specificity
   c. Positive Predictive Value
   d. Negative Predictive Value

23. **Numerator in neonatal mortality rate (NMR) is deaths upto:**
   a. 7 days b. 28 days
   c. 1 year d. 5 years

> ☞ ***Under 5 mortality rate (U5MR):*** *Number of deaths under the age of 5 years per 1000 live births.*
>
> ☞ ***Infant Mortality Rate (IMR):*** *Number of deaths under the age of 1 year per 1000 live births.*
>
> ☞ ***Neonatal Mortality Rate (NMR):*** *Number of deaths under the age of 28 days per 1000 live births.*
>
> ☞ ***Early Neonatal Mortality Rate (ENMR):*** *Number of deaths under the age of 7 days per 1000 live births.*
>
> ***(Reference:*** *Ghai essential Paediatrics, 9th edi, page no 2, table no 1.1)*

24. **Target Infant mortality rate (IMR) in 1997-2017:**
   a. 25 b. 35
   c. 45 d. 55

25. **Measure of variance is:**
   a. Mean b. Median
   c. Mode d. Standard deviation

26. **Sub health post present in every**
   a. Municipality b. VDC
   c. District constituency d. Electoral

27. **Best way of providing health education to the community people is:**
   a. Symposium b. Workshop
   c. Group discussion d. Panel Discussion

28. **Association between nutrition and change in dietary habits can be shown by:**
   a. Chi square
   b. Pearsons index
   c. Correlation co-efficient
   d. None of the above

Forensic Medicine

29. **Edema aquosum is found in:**
   a. Dry drowning
   b. Wet drowning
   c. Immersion syndrome
   d. Hanging

> ☞ ***Note:*** *Go through the notes of asphyxia in the review notes section of forensic medicine*

30. **What is the age at which a person can give consent in our country?**
   a. 12 years b. 16 years
   c. 22 years d. 24 years

Answers:

16.a.	Pneumococcus	17.c.	India ink	18.b.	Salmonella
19.c.	Type III	20.d.	Hep E	21.c.	AIDS, TB, Malaria
22.a.	Sensitivity	23.b.	28 days	24.b.	35
25.d.	Standard deviation	26.b.	VDC	27.c.	Group discussion
28.a.	Chi square	29.b.	Wet drowning	30.b.	16 years

31. **Entry wound in left thumb with metallic lusture and exit in right foot is associated with:**
   a. Gunshot wound b. Electric burn
   c. Lightning burn d. Flame Bum

32. **Most common cause of death in cervical vertebra fracture:**
   a. Axis b. Atlas
   c. C5 d. C6

33. **A hostile witness is who**
   a. Threatens the Judge
   b. Threatens the Lawyer
   c. Gives false evidence
   d. Does not reach to the court

☞ *Hostile witness is one who is supposed to have some interest or motive for concealing part of the truth, or giving completely false evidence against the party who has called him. The common or expert witness may turn hostile.*

34. **In a child 4 permanent molars have erupted. Most probable age of the child is years?**
   a. 6 b. 9
   c. 7 d. 8

Table: Count of teeth

Age	*Number of teeth*
2nd–5th year	*No PT & all 20 TT are present*
6th year	*1–4 PT (due to eruption of 1st molar) & 20 TT*
7th-12th year	***Total 24 teeth are present and mixed dentition is seen up to 12 years of age.***
7th year	*4PT with 20 TT*
8th year	*5–8 PT with 16–19 TT*
9th year	*12 PT (8–I and 4–1st M) with 12 TT (8–M and 4–C)*
10th year	*16 PT (8–I, 4–1stPM, 4–1st M) &8 TT (4 M & 4 C)*
11th year	*20 PT (8–I, 8–PM, and 4–1st M) with 4 TT (canines)*
12th year	*21–24PT with 0–3 TT*
12th–14thyear	*25–28 PT and no TT*
14th–17th year	*28 PT&no TT (no eruption in this age)*
17th –25th year	*29–32 PT (due to eruption of 3rd molar) &no TT*

☞ *[The highlighted numbers are multiple of 4 and if you were not lazy enough while going through the table, you wouldn't have missed that they are all in sequence for both permanent tooth (PT)&temporary tooth (TT).]*

Medicine

35. **In emergency ward a patient with lobar pneumonia has altered sensorium and talks irrelevant. Diagnosis is:**
   a. Acute schizophrenia
   b. Delirium
   c. Depression
   d. BPD

☞ *Pneumonia, particularly lobar pneumonia, usually presents as an acute illness. Systemic features such as fever, rigors, shivering and malaise predominate and delirium may be present.*

☞ *An assessment of the mental state may reveal a delirium. It is an important indicator of the severity of the illness.*

36. **A middle aged person has weakness of left side of body with fever and altered sensorium. On examination there is bilateral up going plantars. CT shows hypodense lesion on bilateral temporal lobe and frontal lobe. Most probable diagnosis is:**
   a. Herpes simplex, b. Encephalitis
   c. Embolic stroke d. Multiple sclerosis

37. **CBC report of a patient is: Hb=4.5gm/dl, WBC=2000 cells/cc, Platelets=55000cells/cc.**
Treatment of choice for this patient is:
   a. Whole blood transfusion
   b. FFP transfusion F 12.0 to 15.5
   c. Platelets transfusion
   d. Bone marrow transplantation

38. **UMN lesion is characterized by:**
   a. Weakness and spasticity
   b. Fasciculation
   c. Flaccidity
   d. Localized muscle atrophy

39. **The findings of hypotension, hypoglycemia, hyponatremia, hyperkalemia, pigmentation on lips and buccal mucosa and darker palmer creases are most consistent with the diagnosis of:**
   a. Cushing's Syndrome
   b. Conns Syndrome
   c. Addison's Disease
   d. Liddle's disease

☞ *Liddle's syndrome presents with hypokalemia and hypertension.*

PART-19

31.b. Electric burn	32.a. Axis	33.c. Gives false evidence
34.a. 6	35.b. Delirium	36.a. Herpes simplex
37.d. Bone marrow transplantation	38.a. Weakness and spasticity	39.c. Addison's Disease

40. A 40 year person came in medicine OPD with complains of SOB and chest pain. On examination there was a systolic murmur which became prominent on standing. What is the most probable diagnosis?

a. DCM b. AS
c. AR d. MVP

Key signs of MVP (Mitral valve prolapse)

- *Mid or late (non-ejection) systolic click*
- *Midsystolic rumbling murmur that increases with standing and the Valsalva maneuver and decreases with squatting.*

(Reference: step up to medicine, page no 46; and Harrison 19th edi, page no 1546)

41. A 40 year male came in OPD with complain of multiple genital ulcers, oral ulcers, ELISA positive for HIV. Most probable diagnosis is?

a. Syphilis b. Gonorrhoea
c. AIDS d. Chancre

42. Which of the following is the most common cause of impaired red cell production, worldwide?

a. Iron deficiency anemia
b. Megaloblastic anemia
c. Thalassemia
d. Sickle cell anemia

43. A 16 year girl come in medicine OPD with complain of Red Rose spots and 1 cm splenomegaly. The most probable diagnosis is:

a. Enteric fever b. Measles
c. Chronic Malaria d. Chronic kala-azar

44. A 20 year old healthy lady has weight gain of 10 kg in last 6 month, cold intolerance. She has also history of fatigue. In her investigation TSH is increased. The most probable diagnosis is?

a. Primary hypothyroidism
b. Secondary hypothyroidism
c. Secondary hyperthyroid
d. Subclinical hyperthyroidism

45. A patient with hunger pain in epigastric region came in medicine OPD. For confirmation of diagnosis endoscopic biopsy was done. Endoscopic biopsy will be positive for which of the following organism?

a. H.pylori b. Campylobacter
c. E.coli d. Samonella

Answers:

31.b. Electric burn	32.a. Axis	33.c. Gives false evidence
34.a. 6	35.b. Delirium	36.a. Herpes simplex
37.d. Bone marrow transplantation	38.a. Weakness and spasticity	39.c. Addison's Disease
40.d. MVP	41.c. AIDS	42.a. Iron deficiency anemia
43.a. Enteric fever	44.a. Primary hypothyroidism	45.a. H.pylori

46. In which of the following disease dopaminergic neurons are damaged?

a. Parkinsonism b. Myasthenia gravis
c. Multiple sclerosis d. GBS

47. A factory worker came in Medicine OPD who is newly diagnosed as a case of TB with X-ray features but sputum negative. You will treat the patient with which category of ATT?

a. Cat I b. Cat II
c. Cat III d. Cat IV

48. A young male develops high grade intermittent fever. Peripheral Blood Smear would be most helpful in the diagnosis of:

a. Malaria
b. Kalazar
c. Infectious mononucleosis
d. Enteric Fever

49. A 45 year patient has history of 25 years of alcohol consumption. Which of the following vitamin will be deficient in him?

a. Thiamine b. Riboflavin
c. Pyridoxine d. Niacin

50. A 45 year male presented in emergency ward with left sided chest pain but no radiation to shoulder but aggravates on coughing and inspiration. He has past history of low grade fever, ECG shows STE in most of leads. The most probable diagnosis is:

a. MI b. Acute Pericarditis
c. Aortic Dissection d. Coartation of aorta

- *This patient has acute pericarditis. He has a history of low grade fever (probably recent viral infection), the chest pain is positional and pleuritic (It is aggravated by lying supine, coughing, swallowing, and deep inspiration and is relieved by sitting up and leaning forward). Pericardial friction rubis a classic finding on examination. The diagnosis rests on a combination of history, pericardial friction rub, and typical ECG changes (patient has diffuse ST*

46.a. Parkinsonism	47.a. Cat I	48.a. Malaria
49.a. Thiamine	50.b. Acute Pericarditis	51.a. Apical lobe infiltrates

elevation). Although not present in this patient, PR depression is aspecific finding in acute pericarditis. The upward concave shape of the ST segments and the unusual distribution of changes (involving anterior and inferior leads) help to distinguish pericarditis from acute MI. Most cases of acute pericarditis are self-limited. Treatment with an NSAID ismainstay of therapy.

51. A 45 year thin and lean patient come to Medicine OPD with complain of chest pain, fever and blood stained sputum. He is diagnosed as Pulmonary Tuberculosis. What will be X-ray features of pulmonary T.B.?

a. Apical lobe infiltrates b. Perihilar infiltrates
c. Peribronchiolar infiltrates d. Basal infiltrates

52. A patient came to Emergency ward with history of ingestion of OP poison 3 days ago. You find patient drowsy and he has difficulty in neck extension. There is also numbness on limbs. The most probable diagnosis is:

a. Intermediate syndrome - 1-4 days
b. OPIDN - 1-3 weeks
c. Hyperkalemia
d. Hypocalcemia

53. A 65 year patient with history of high blood pressure suddenly lost his consciousness. He has no history of neck rigidity, Kernig's sign is also negative. He recovered quickly, the most probable diagnosis is:

a. SAH b. TIA
c. Epilepsy d. Meningitis

54. A patient came to emergency with complain of distention of abdomen. Clinically all of the following tests are done for ascites except:

a. Shifting dullness - 0.5-1 L b. Fluid thrill - 1-2 L.
c. Puddle sign - 120 ml. d. Manson test

55. Choose a false statement regarding CO poisoning?

a. CO has 200 times more affinity to Hb than that of O_2
b. It does not cause hypoxia
c. CO poisoning is treated with 100 %O_2
d. CO poisoning leads to formation of carboxyhemoglobin

Surgery

56. There is sudden breathlessness after fall in a 25 year old patient. He has decreased chest movement, decreased breath sound, tympanic on percussion on left side. Trachea deviated to opposite side. On chest X-ray there is left side lung contusion of size 6.3 cm x 3 cm. What is the most probable diagnosis?

a. Tension Pneumothorax
b. Pericardial Effusion
c. Pneumothorax
d. Hemothorax

57. Earliest symptoms in acute appendicitis is?

a. Fever b. Anorexia
c. Vomiting d. Epigastric pain

Pain, Nausea/vomiting and fever is Murphy's triad of acute appendicitis. The sequence of presentation in 95% of patients with acute appendicitis usually starts with anorexia, followed by abdominal pain and then nausea and/or vomiting (seen only in 75% cases). Anorexia is important symptom almost always associated with acute appendicitis. This is what recent studies and Washington's manual for surgery say, but other standard books Bailey & Love and Schwartz still advocate for abdominal pain to be the earliest symptom.

58. 1 year old child has sudden pain abdomen with drawing up of legs and screaming. After sometimes the child becomes completely normal. USG shows target sign positive. What is the diagnosis?

a. Intussusception
b. Meckel's Diverticulum
c. Hirchsprung's Disease
d. Diarrhea

Intussusception is the m/c cause of intestinal obstruction in children.
M/c age- 3-9 months; weaning starts→hypertrophy of payer's patches→leads to intussusception.
M/c type in children →ileocolic
M/c in adults→ colocolic

59. Post thyroidectomy patient suddenly developed dyspnea. On opening dressing of surgical site, there is swelling in wound. What is your management plan?

a. Laryngoscopy and intubation
b. Open sutures
c. Return to OT
d. Tracheostomy

PART-19

51.a. Apical lobe infiltrates	52.a. Intermediate syndrome	53.b. TIA	54.d. Manson test
	55.b. It does not cause hypoxia	56.a. Tension Pneumothorax	57.b. Anorexia
	58.a. Intussusception	59.b. Open sutures	60.a. Rectal polyp

61.b.	FNAC	62.a.	Papillary ca	63.d.	PR examination
64.b.	Carbuncle	65.c.	Indirect Inguinal hernia	66.b.	Murphy's sign

60. Most common cause of bleeding PR in 2 year old child is?

a. Rectal polyp b. Hemorrhoids
c. Anal fissure d. Mucosal prolapse

Rectal polyps commonly occur in children < 5 years of age. Typical symptoms are rectal bleeding, mucus discharge, diarrhea and abdominal pain. Best treatment is submucosal resection endoscopically or surgically (provided cancerous change has been excluded).

Answers:

46.a.	Parkinsonism	47.a.	Cat I	48.a.	Malaria
49.a.	Thiamine	50.b.	Acute Pericarditis	51.a.	Apical lobe infiltrates
52.a.	Intermediate syndrome	53.b.	TIA	54.d.	Manson test
55.b.	It does not cause hypoxia	56.a.	Tension Pneumothorax	57.b.	Anorexia
58.a.	Intussusception	59.b.	Open sutures	60.a.	Rectal polyp

61. There is mobile mass on right lobe of thyroid. Which investigation will you order?

a. USG
b. FNAC
c. Radioisotope imaging
d. TFT

62. Swelling arising from right lobe of thyroid. FNAC shows papilla with nuclear halo. Most probable diagnosis is?

a. Papillary ca b. Medullary ca
c. Follicular ca d. Anaplastic ca

63. A 60 year old patient come to Surgery OPD with complain of Bleeding per rectum. You will not allow him to go without performing which of the following clinical test.

a. USG b. Occult blood
c. MRI d. PR examination

64. A 50 year diabetic with multiple discharging sinuses at nape of neck. Probable diagnosis is?

a. Furuncle b. Carbuncle
c. Actinomycosis d. Abscess

65. A child has been brought with swelling in inguinal region which is reducible. Diagnosis is?

a. Umbilical hernia
b. Direct inguinal hernia
c. Indirect Inguinal hernia
d. Incarcerated

The congenital inguinal hernia is known as indirect, oblique or lateral while the acquired hernia is called direct or medial. An indirect hernia is lateral as its origin is lateral to the inferior epigastric vessels. It is also oblique as the hernia passes obliquely from lateral to medial through the abdominal muscle layers.

Inguinal hernia in neonates and young children is always of this congenital type.

66. A 35 year old female present with pain in right upper abdomen. She was diagnosed as acute cholecystitis. Which of the following sign is positive in acute cholecystitis?

a. Obturator sign b. Murphy's sign
c. Psoas sign d. Cullen sign

67. A 24 year male with 165 centimeter height and 60 kg weight came to emergency with burn on both legs, both hands and face. 24 hour fluid requirement is calculated using which of the following formulae?

a. 4 x weight in Kg x percentage of body surface burn
b. 2 x weight in Kg x percentage of body surface burn
c. 4 x height of a person x percentage of body surface burn
d. 2 x height of a person x percentage of body surface burn

68. Which of the following is not a complication of Foleys catheterization?

a. Phimosis b. Trauma
c. Urinary diverticula d. UTI

包茎,包皮过长

69. In a 60 year old female there is a hard mass in right breast with axillaries lymphadenopathy and nipple of that breast is retracted. The most probable diagnosis is :

a. Ca Breast b. Fibroadenoma
c. Chronic Mastitis d. Breast Abscess

70. An 18 year old young male comes in surgery OPD with sudden pain over scrotal region with history of vomiting. Pain increases on lifting testis. The most probable diagnosis is:

a. Acute epididymo-orchitis
b. Testicular torsion
c. Inguinal hernia
d. Hydrocele

61.b.	FNAC	62.a.	Papillary ca	63.d.	PR examination	68.a.	Phimosis
64.b.	Carbuncle	65.c.	Indirect Inguinal hernia	66.b.	Murphy's sign	70.b.	Testicular torsion

69.a.	Ca Breast

C7.a

Testicular torsion is most common between 10 and 25 years of age, although a few cases occur in infancy. Typically, there is sudden agonizing pain in the groin and the lower abdomen. The patient feels nauseated and may vomit. Redness of the skin and a mild pyrexia may result in the condition being confused with epididymo-orchitis in the older patient; however, in epididymo-orchitis there will usually be dysuria associated with the accompanying urinary infection. Elevation of the testis reduces the pain in epididymo-orchitis and makes it worse in torsion.

Pediatrics

71. Most common syndrome that may occur to the baby of a 45 years old pregnant woman is?

a. Downs Syndrome
b. Turners' Syndrome
c. Klenifelter's syndrome
d. All of the above

72. A child with history of sore throat has dysphagia, nasal regurgitation and difficulty in eye movement. What is the diagnosis?

a. Diphtheria b. Bulbar polio
c. Enteric fever d. Measles

Bulbar polio accounts for 2% cases and results from a cranial nerve lesion, resulting in respiratory insufficiency, nasal regurgitation, and difficulty in swallowing, eating or speaking.
(Reference: Ghai essential pediatrics, 8th e, page no 218, 3rd last paragraph.)

73. Which of the following is used in pregnancy can prevent Neural Tube Defect?

a. Folic acid b. Pyridoxine
c. Niacin d. Cobalamine

74. When used during pregnancy, which of the following drug causes neural tube defect?

a. Valproate b. Phenobarbitone
c. Diazepam d. Streptomycin

75. Measles vaccine is given at months of age?

a. 7 b. 9
c. 12 d. 24

Answers:

61.b. FNAC	62.a. Papillary ca	63.d. PR examination
64.b. Carbuncle	65.c. Indirect Inguinal hernia	66.b. Murphy's sign
67.a. 4 x weight in Kg ...	68.a. Phimosis	69.a. Ca Breast
70.b. Testicular torsion	71.a. Downs Syndrome	72.b. Bulbar polio
73.a. Folic acid	74.a. Valproate	75.b. 9
76.d. Dublin Johnson syndrome	77.b. Kwashiorkor	78.c. CMV
79.a. 9 Months	80.b. Low birth weight	81.b. Mental retardation

76. Conjugated hyperbilirubinemia is seen in:

a. Gilbert's syndrome
b. Criggler Najjar syndrome
c. Breast milk jaundice
d. Dubin Johnson syndrome

Dubin Johnson syndrome and Rotor's syndrome are congenital causes of conjugated bilirubinemia.

77. A child edema, poor feed, dry sparse hair and skin changes came to pediatrics OPD. What is the diagnosis?

a. Marasmus
b. Kwashiorkor
c. Nephrotic Syndrome
d. Healthy Baby

78. Which of the following is not a cause of salt and pepper appearance of fundus?

a. HSV b. Rubella
c. CMV d. Syphilis

79. A child can say mama, baba, can wave bye, walk few steps. Age of the baby is?

a. 9 Months b. 15 Month
c. 18 Month d. 24 Month

80. Which of the following is the most common determinants of survival in early life?

a. Intrauterine infection
b. Low birth weight
c. Breastfeeding
d. URTI

81. Which of the following is absent in Kwashiorkor?

a. Muscle wasting
b. Mental retardation
c. Diarrhoea
d. Oedema

Differences between Marasmus and Kwashiorkor:

Clinical findings	*Marasmus*	*Kwashiorkor*
Occurrence	*More common*	*Less common*
Edema	*Absent*	*Present*
Activity	*Active*	*Apathetic*
Appetite	*Good*	*Poor*
Liver enlargement	*Absent*	*Present*
Mortality	*Less than*	*More than*
Recovery	*Kwashiorkar*	*Marasmus*
Infections	*Early*	*Slow*
	Less prone	*More prone*

82. A child sometimes becomes blue, especially on crying but has no features of CCF. The most probable diagnosis is:

a. VSD b. ASD
c. PDA d. TOF

Clinical features of TOF:

1. *Cyanosis is the most common symptom.*
2. *Degree of clinical symptoms depends largely on the degree of right ventricular out flow obstruction.*
3. *Patients experience Tet spells—they will squat after exertion such as exercise or crying spell in an infant. This maneuver increases SVR, which helps shunt blood from the RV to the lungs instead of the aorta. Oxygen, morphine, and β-blockers may also be needed if the patient continues to be cyanotic.*
4. *Murmur is typically crescendo–decrescendo in nature and heard best at the left upper sternal border.*

83. A baby born at 39 weeks of POG and weight of the baby was 2 kg then it is:

a. Early for gestational age
b. Underweight for normal gestational age
c. Premature baby
d. Normal for gestational age

84. A boy comes with macules, papules, vesicles with history of similar lesion in 10 year old brother. What is the diagnosis?

a. Measles
b. Varicella
c. Herpes
d. Infectious mononucleosis

85. A child has difficulty in walking and standing from sitting position. His elder brother with similar problem is now 18 years old. This is:

a. Myopathy b. Neuropathy
c. Central lesion d. Polio

Obstetrics & Gynecology

86. A 35 year old female with $G_5P_4L_4$at 10 weeks of gestation complains of UV prolapse but uterus is inside the introitus. What is the treatment?

a. Vaginal Hysterectomy
b. Termination of pregnancy
c. Ring Pessary
d. Conservative management

☞ *(Reference: Shaw's text book of Gynaecology, 15th edi, page no 337)*

87. A 30 year female came to Gynecology OPD with history of not conceiving for last 3 years. Investigation that should be done is:

a. Tubal insufflations test
b. HSG
c. USG
d. Fern Test

88. HSG is best done at .... of Menstruation:

Hysterosalpingogram

a. 7-12 days
b. After 14 days
c. Just before menstruation
d. After 4 days

☞ *HSG is performed between end of the menstrual period and ovulation (usually 10th day of the cycle). (Reference: Shaw's text book of Gynecology, 15th e, page no 221)*

89. If twinning takes place at 4 -8 days, its result would be:

a. Diamniotic Dichorionic twins
b. Diamniotic Monochorionic twins
c. Monoamniotic Monochorinic twins
d. Conjoint twins

☞ ***Dizygotic twins 80%*** *(also known as fraternal or binovular twins) results from fertilization of two ova, most likely ruptured from two distinct Graafian follicles usually of the same or one from each ovary, by two sperms during single ovarian cycle. The babies bear only fraternal resemblance to each other (that of brothers and sisters from different births) and hence fraternal twins.*

☞ ***In monozygotic twins 20%*** *(aka identical or unilocular), the twinning may occur at different periods after fertilization. On rare occasion, following possibilities may occur:*

- *If the division takes place* ***within 72 hrs*** *after fertilization (prior to morula stage) the resulting embryos will have two separate placenta, chorions and amnions* ***(Diamniotic-dichorionic or D/D-30%).***
- *If the division takes place b/w the* ***4th and 8th day*** *after the formation of inner cell mass when chorions has already developed-* ***Diamniotic-Monochorionic twins develops(D/M-66%).***
- *If the division occurs* ***after 8th day of fertilization****, when the amniotic cavity has already formed, a* ***Monoamniotic-monochorionic twins*** *develops* ***(M/M-3%).***

☞ *On an extremely rare occasion, division occurs* ***after 2 weeks*** *of the development of embryonic disc*

82.d.	TOF	83.b.	Underweight for ...	84.b.	Varicella
85.a.	Myopathy	86.c.	Ring Pessary	87.b.	HSG
88.a.	7-12 days	89.b.	Diamniotic Monochorionic twins	90.b.	AFP

*resulting in the formation of **Conjoined twins (<1%)** called **Siamese twins.***

(Reference: Dutta's Text book of Obstetrics, 7th e, pg no 200.)

90. A 20 year old female came to Gynae OPD with unilateral ovarian mass. Which investigation is appropriate for her?

a. β-hCG b. AFP
c. CA-125 d. X-ray

☞ *Epithelial ovarian carcinomas make up nearly 90% of all ovarian cancers. It occurs more frequently in older women and is derived from the surface epithelial cells of the ovary. Mucinous carcinoma are the second most common type of epithelial tumors (10 to 20%) after serous type (35-50%). Mucinous tumors are usually unilateral and in some cases grow to a very large size.*

Most common tumor in young female is Germ cell tumor. Hence in this female, it could either be a dysgerminoma (50% of all GCT), endodermal sinus tumor (20%) or malignant (immature) teratoma (20%). Germ cell cancers arise from cells that produce ova or eggs.

- *Dysgerminomas are the only GCT with a significant rate of bilateral involvement of 15-20%.*
- *Endodermal sinus tumors are unilateral in 100% cases.*
- *Granulosa cell tumors are unilateral in 98% of cases.*
- *Embryonal cell carcinomas are unilateral in 2/3rd cases at the time of diagnosis.*

Ovarian tumor	*Tumor marker*
Epithelial ovarian tumors *a. Serous variety* *b. Mucinous variety* *c. Serous & mucinous*	*a. CA-125* *b. CA 19-9, CEA (carcino-embyonic antigen)* *c. OCCA (Ovarian cystadenoma associated antigen), OCA*
Endodermal sinus/ Yolk sac tumor	*AFP*
Choriocarcinoma	*HCG*
Dysgerminoma	*LDH, Alkaline phosphatase*
Granulosa cell tumor	*Inhibin*

91. Commonest cause of postmenopausal bleed is:

a. Ca endometrium b. Senile vaginitis
c. Fibroid d. DUB

92. When sperm fertilizes ovum, what is formed?

a. Zygote b. Blastomere
c. Morula d. Blastocyst

93. What is the most appropriate management of red degeneration in pregnancy?

a. Conservative management
b. Myomectomy
c. Hysterectomy
d. Termination of pregnancy

Management of red degeneration of fibroid

☞ *Patient is managed conservatively.*

☞ *Patient is put to bed rest and given analgesics (to relieve the pain), sedatives, and if required, antibiotics.*

☞ *If because of mistaken diagnosis laparotomy is done, abdomen is closed without doing anything.*

☞ *Mycomectomy should never be contemplated during cesarean section as vascularity of fibroid is increased during pregnancy (due to increased estrogen) leading to increased blood loss during cesarean section.*

94. A 45 year female with fibroid complains of heavy bleed. She passes clots in bleed. Which type of fibroid you suspect?

a. Submucous b. Intramural
c. Subserous d. Cervical

Submucous fibroid may get infected or ulcerated to cause metrorrhagia or irregular bleeding. Although, this variety is least common (interstitial or intramural: 75%, subserous: 15%, submucous: 5% and cervical: 1-2%), but it produces maximum symptoms.

95. A patient complains of urinary incontinence after trans-abdominal hysterectomy (TAH) when the vaginal vault is found to be normal while urine is present in vagina. The test done to identify the place of opening is?

a. HSG b. Three swab test
c. USG d. MRI

96. Breech delivery is easy when?

a. Breech lies posteriorly
b. Breech lies anteriorly
c. Breech lies laterally
d. None of the above

Answers:

76.d.	Dublin Johnson syndrome	77.b.	Kwashiorkor	78.c.	CMV
79.a.	9 Months	80.b.	Low birth weight	81.b.	Mental retardation
82.d.	TOF	83.b.	Underweight for ...	84.b.	Varicella
85.a.	Myopathy	86.c.	Ring Pessary	87.b.	HSG
88.a.	7-12 days	89.b.	Diamniotic Monochorionic twins	90.b.	AFP
91.a.	Ca endometrium	92.a.	Zygote	93.a.	Conservative management
94.a.	Submucous	95.b.	Three swab test	96.b.	Breech lies anteriorly

The principles in conduction of assisted breech delivery are;

1. *Never to rush*
2. *Never pull from below but push from above*
3. ***Always keep the fetus with the back anteriorly***

☞ *If the back remains posteriorly, rotate the trunk to bring the back anteriorly (sacro-anterior) for the delivery of arms and after-coming head.*

(Reference: Dutta's Text book of Obstetrics, 7th e, page 381 & 383)

97. Elective CS is most successful in which of the following case?

a. Obese female
b. Oligohydramnios
c. Fetus not engaged
d. Posterior fetal back

98. Double protection is provided by?

a. Minipills
b. Emergency contraceptive
c. Sangini
d. Condom

97.c. Fetus not engaged	98.d. Condom	99.a. Radial nerve
100.a. Radial	101.c. Scaphoid	102.a. Cold abscess
103.a. ABC	104.b. Feeble pulse	105.c. Scleritis

has also a place in checking the spread of the dreaded AIDs infection beside its contraceptive use.

(Reference: Shaw's text book of Gynaecology, 15th edi, page no 224,)

Orthopedics

99. A 35 year old man fall from roof of house and there is fracture of humerus but no extension of wrist. Nerve injured at fracture of lower 3rd of humerus is:

a. Radial nerve
b. Median
c. PIN
d. Ulnar

100. Saturday night palsy is due to compression of which nerve?

a. Radial
b. Median
c. Axillary
d. Ulnar

☞ *Saturday night palsy, also known as weekend palsy, results due to compression of radial nerve between the radiospiral groove and the lateral intermuscular septum. Typically, in Saturday night when in an inebriated condition, a person slumps or sleeps with his mid-arm compressed between the arm of chair and his body. It is a temporary palsy (Neurapraxia grade I nerve injury); complete recovery occurs in 6 months. Crutch palsy and honeymoon palsy are similar injuries of radial nerve.*

101. A 20 year old boy fall on his wrist of left arm. Most common carpal bone fracture is:

a. Hamate
b. Lunate
c. Scaphoid
d. Pisiform

102. Most common complication of TB spine of concern is:

a. Cold abscess
b. Neurological involvement
c. Fracture of vertebrae
d. None of the above

Complications of TB spine

1. *Cold abscess: Commonest complication*
2. *Neurological compression*
3. *Pot's paraplegia*

103. In ER, a case of RTA came with fracture tibia with open wound of size 5cm x 3 cm and bone protruding outside the skin with massive blood loss. What will you do first?

a. ABC
b. Bone replaced back
c. Wound lavage and dressing
d. Only splintage

104. Not seen in compartment syndrome of forearm?

a. Pallor
b. Feeble pulse
c. Stretch pain
d. Paresthesia

☞ *Absence of distal pulse (pulselessness) is the feature of compartment syndrome.*

105. A patient with Rheumatoid Arthritis develops discomfort and burning sensation in his right eye with lacrimation. What is the diagnosis?

a. Keratitis
b. Uveitis
c. Scleritis
d. Conjunctivitis

Anterior uveitis is an extra-skeletal manifestation of ankylosing spondylitis while scleritis is associated with rheumatoid arthritis. Extra-articular Manifestations in Rheumatoid Arthritis. Ocular manifestations of rheumatoid arthritis are:

☞ *Scleritis*
☞ *Scleromalacia—softening of the sclera; if not treated may perforate, leading to blindness*
☞ *Dry eyes (and dry mucous membranes in general); may develop Sjögren's syndrome*

Answers:		
91.a. Ca endometrium	92.a. Zygote	93.a. Conservative management
94.a. Submucous	95.b. Three swab test	96.b. Breech lies anteriorly
97.c. Fetus not engaged	98.d. Condom	99.a. Radial nerve
100.a. Radial	101.c. Scaphoid	102.a. Cold abscess
103.a. ABC	104.b. Feeble pulse	105.c. Scleritis

ENT

106. Immediate treatment in bilateral vocal cord tumor with respiratory distress:

a. Tracheostomy
b. Bronchoscopy
c. Intubation
d. Vocal cord resection

107. Submandibular space infection is known as

a. Ludwig's angina
b. Vincent's angina
c. Paraphayngeal abscess
d. Quinsy

106.a. Tracheostomy
107.a. Ludwig's angina
108.c. Meningitis

Submandibular space lies between mucus membrane of the floor of mouth and tongue on one side and superficial layer of deep cervical fascia extending between the hyoid bone and mandible on the other side. Ludwig's angina is a fascial space infection with bilateral involvement of the submandibular spaces. It is divided into two compartment:

- *Sublingual compartment: above the mylohyoid*
- *Submaxillary and submental compartment: below the mylohyoid*

108. A 60 year old man with history of LOC and unilateral ear discharge develops fever, headache and neck rigidity. Most probable diagnosis is?

loss of consciousness.

a. Mastoiditis b. Petrositis
c. Meningitis d. Encephalitis

109. What should not be done to an ear when there is foreign body?

a. Remove with Jobson's probe
b. Forceps
c. Syringing
d. Remove with hook

110. A 35 year female is diagnosed as a case of Sensory neural hearing loss (SNHL). What is treatment of choice in bilateral severe SNHL?

a. Cochlear implant
b. Hearing Aid
c. Surgery
d. None of the above

111. Most common cause of acute epiglottitis is:

a. H. influenzae type b
b. Parainflenza virus
c. Streptococcus
d. Pseudomonas

112. Chronic maxillary sinusitis recent treatment modality is:

a. Caldwell Luc
b. FESS (Functional endoscopic sinus surgery)
c. Antral wash
d. None of the above

Ophthalmology

113. Snellen's chart is read at meter of distance from patient:

a. 6 b. 3
c. 12 d. 1.5

114. Most common primary intraocular tumor in child is?

a. Retinoblastoma b. Lymphoma
c. Melanoma d. Lymphosarcoma

115. A patient has history of injury over right eye with leaves of a tree. He has pain and lacrimation. On examination corneal epithelial defect was found. The diagnosis is:

a. Corneal FB b. Fungal keratitis
c. Penetrating injury d. Conjunctivitis

- *This is a case of mycotic corneal ulcer (fungal keratitis) supported by the diagnostic history of injury by vegetative material such as crop leaf, branch of a tree, straw hay or injury by animal tail. Farmers are the common sufferers especially during harvesting season. On examination, delicate feathery finger like extensions are present into surrounding stroma under the intact epithelium. Topical antifungal eye-drops (nystatin, fluconazole or natamycin) is used for treatment for a long period (6 to 8 weeks).*

116. A 75 years old male on fundus examination has microaneurysm, dot and blot hemorrhage. The most probable diagnosis is:

a. Hypertensive RP b. Diabetic RP
c. Sickle cell RP d. Papilloedema

- *This is a case of non-proliferative diabetic retinopathy. Other feature of NRDP are hard exudates, retinal edema, cotton wool spots, intraretinal microvascular abnormalities and dark blot hemorrhages representing hemorrhagic retinal infarcts.*

PART-19

117. **Most common ocular side effect of steroid:**
   a. Glaucoma
   b. Keratitis
   c. Corneal ulcer
   d. None of the above

Anesthesia

118. **Most common cause of postoperative restlessness is?**
   a. Hypercarbia
   b. Hypoxia
   c. Hypotension
   d. Wearing off of muscle relaxant

119. **Ratio for chest compression and artificial respiration is?**
   a. 30:2 b. 4:1
   c. 2:1 d. 1:1

120. **Anesthetic agent causing uterine relaxation is:**
   a. Ketamine b. Propofol
   c. Halothane d. Midazolam

☞ *Like other inhalational agents used nowadays, halothane also relaxes uterus. (Source: Short textbook of anesthesia by Ajay Yadav, 5th edition, page 80)*

Answers:

106.a. Tracheostomy	107.a. Ludwig's angina	108.c. Meningitis
109.d. Remove with hook	110.a. Cochlear implant	111.a. H. influenzae type b
112.b. FESS	113.a. 6	114.a. Retinoblastoma
115.b. Fungal keratitis	116.b. Diabetic RP	117.a. Glaucoma
118.b. Hypoxia	119.a. 30:2	120.c. Halothane

121. **CVP line is opened in:**
   a. Internal jugular artery
   b. Subclavian artery
   c. Subclavian vein
   d. External Juglar Vein

☞ *However ideal vein for monitoring CVP is right internal jugular vein (because it is valveless and in direct communication with right atrium), CVP can also be measured by subclavian, basilica and femoral vein. Since, option here includes only subclavian vein, answer is option C.(Reference: Short Text book of anesthesia, Ajay Yadav, 5th edi, page 59)*

122. **A baby is planned for major surgery. His/her mother is advised to stop Breast feeding to her child. Breast feeding should be stopped how long before surgery?**
   a. 2 Hour b. 4 Hour
   c. 6 Hour d. 8 Hour

To decrease chance of aspiration

☞ *Patients should be fasting for 8 hours for solid food and 3 to 4 hours for clear fluids. Clear fluids only include water and juices without pulp, tea, coffee are considered as unclear fluids. So full fasting of 8 hours is needed.*

☞ *For children: 6-8 hours for solid food and 2-3 hours of fasting for clear fluids is considered sufficient.*

☞ *For infant (on milk): fasting of 4 hours for milk and 2 hours for water is sufficient.*

*(**Reference:** Short Text book of anaesthesia, Ajay Yadav, 5th e, pg no 57.)*

123. **Diazepam is used as pre-anesthetic medication for all except:**
   a. To decrease anxiety
   b. To sedate
   c. As analgesia
   d. For amnesia

124. **What is most important in pre-operative assessment of a child with submandibular abscess?**
   a. Airway b. Cardiac problems
   c. Investigations d. X-ray

125. **A patient in postoperative ward develops headache which worsens on sitting. Diagnosis is**
   a. Hypotension
   b. Meningitis
   c. Post dural puncture headache (PDPH)
   d. Subdural leakage of CSF

☞ *Post-dural puncture headache is low pressure headache due to the seepage of CSF from the dural rent (hole) created by spinal needle. It usually presents after 12-24 hours (corresponds to the time when patient starts sitting after operation). It is usually occipital but can be frontal also. It may be associated with pain and stiffness of neck. It is throbbing and the typical presentation is that pain increases on sitting or standing and relieved on lying down. This happens due to increase in CSF pressure at lumbar level in sitting or standing.*

Most common complications of spinal anesthesia:

☞ *Hypotension (Intraoperative)*

☞ *headache (Postoperative)*

121.c. Subclavian vein	122.b. 4 Hour	123.c. As analgesia
124.a. Airway	125.c. Post dural ...	126.a. Psoriasis

Dermatology

126. There is well defined erythematous plaque with silvery scales in extensor surface of a 25 year old male patient. What is the diagnosis?

a. Psoriasis b. Lichen Planus
c. Dermatitis d. Bee sting

127. A patient presents with features of mild muscle weakness, erythematous lesions on periorbital area, chest and knuckles. What is the most probable diagnosis?

a. Dermatomyositis b. SLE
c. Psoriasis d. Lichen Planus

Lesions in dermatomyositis:

Skin lesions:	Systemic involvement
• Periorbital heliotrope erythema • Gottron's papule • Gottron's sign • Periungual telangectesia • Calcinosis in juvenile variety	• Proximal myosistis • Cardiomyopathy • Joint involvement

Psychiatrics

128. Which of the following is a thought disorder?

a. Schizophrenia b. Depression
c. OCD d. BPD

129. A female at 6 months postpartum has tendency of pulling threads and does not recognizes family members. Most probable diagnosis is?

a. Acute schizophrenia
b. Depression
c. Adjustment disorder
d. Delirium

☞ *This is a case of postpartum depression, seen in 10-20% of mothers. It is more gradual in onset over the first 4-6 months following delivery or abortion. Change in the hypothalamo-pituitary- adrenal axis may be a cause. It is generally manifested by loss of energy & appetite, insomnia, social withdrawal, irritability and even suicidal attitude.*

130. At night time, a man has tendency to have flash back of all the events during the day. But he could not control himself from this event. The most probable diagnosis is

a. Obsession b. Depression
c. Compulsion d. Schizophrenia

Comprehensive Structured Questions

A. A 45 year male patient came to emergency of a remote hospital with complain of left sided chest pain radiating to shoulder and jaw?

131. Most probable diagnosis is?

a. MI
b. Gastritis
c. Pneumonia
d. Pericardial effusion

132. Earliest marker that is seen in investigation is:

a. CK b. CK-MB
c. Troponin d. LDH

☞ *1st to rise in MI is Myoglobin.*
☞ *Most sensitive/specific marker is Trop-I*
☞ *Re-infarction- CPK-MB*
☞ *Last to rise in MI- LDH*

	Rise	*Peak*	*Fall*
CPK-MB	*4-6 hrs*	*12-24 hrs*	*48-72 hrs*
Trop-T	*3 hrs*	*24 hrs*	*7-10 days*
Trop-I	*3 hrs*	*24 hrs*	*7-10 days*

133. Investigation of choice is:

a. ECG b. Blood for Trop I
c. CT d. X-ray

134. If available which of the following treatment will you do?

a. Thrombolysis
b. Coronary Artery Bypass surgery
c. Aspirin
d. Clopidogrel

135. Which of the following is not a complication of above condition?

a. AV block b. Berry aneurysm
c. Arrhythmia d. VSD

☞ *Rupture of papillary muscle and ventricular septal rupture can occur as mechanical complication to acute MI. ventricular aneurysm is the late complication of MI.*

Answers:

121.c. Subclavian vein	122.b. 4 Hour	123.c. As analgesia
124.a. Airway	125.c. Post dural ...	126.a. Psoriasis
127.a. Dermatomyositis	127.a. Schizophrenia	129.b. Depression
130.a. Obsession	131.a. MI	132.c. Troponin
133.a. ECG	134.b. Coronary Artery ...	135.b. Berry aneurysm

PART-19

B. A young lady who had undergone multiple curettage for incomplete abortion comes with complain of amenorrhea of 3 months.

136. The most probable diagnosis is:

a. Asherman's syndrome
b. DUB
c. Premature menopause
d. Missed abortion

137. What is the cause of the above condition?

a. Incomplete curettage
b. Excessive curettage
c. Drug used
d. None of the above

☞ *This is a clear case of uterine synechiae (Asherman's syndrome). It is simply amenorrhea due to intra-uterine synechiae formation most commonly due to vigorous uterine curettage (D & C) in the postpartum period and also following diagnostic curettage in DUB. Other causes are myomectomy, TB endometritis, LSCS during MTP and in severe PID. It typically presents as hypomenorrhea, amenorrhea and/or infertility.*

138. Investigation that you will perform:

a. Hysterosalphingography
b. X-ray
c. USG
d. Hysteroscopy

Investigations

1. *Estrogen progesterone challenge test: negative*
2. *Hysteroscopy: **investigation of choice**; reveals extent of adhesion directly*
3. *HSG: shows honeycomb appearance*

139. How would you like to manage this case?

a. IUD insertion b. Adhesion lysis
c. Estrogen support d. All of the above

Treatment

1. *Hysteroscopic lysis of adhesion followed by*
2. *High estrogen stimulation of endometrium*
3. *Inflatable balloon stent or Cu-T insertion to prevent re-adhesion of wall*

140. Complication in subsequent pregnancy?

a. Uterine malformation
b. Birth defects
c. Preterm labour
d. Spontaneous abortion

☞ *The endometrium has been badly denuded down to the basal layer a condition called "Unstuck Asherman's" can occur and the endometrium will fail to respond to hormonal influence, even in the presence of exogenous estrogen. In this case surrogacy is the only viable option for a biological child. First-trimester miscarriage (Of course this is a significant risk in any pregnancy, but it's higher after Asherman's) is the usual outcome.*

C. A young fatty 35 year married woman came to surgery OPD with known case of gallstone and mucocele.

141. Which of the followings is true?

a. Venous drainage into portal vein
b. Cystic artery is branch of left hepatic
c. Capacity of GB 150-200 ml
d. 90% of the gall stones are radio opaque

☞ *Cystic artery is the branch of right hepatic artery.*
☞ *Capacity of GB is 35-50 ml.*
☞ *90% of gallstones are radiolucent.*

142. Most common type of gall stone is:

a. Cholesterol b. Mixed stones
c. Brown pigmented d. Black pigmented

Types of gallstones:

☞ *Cholesterol stones (10%): usually green in color, radiolucent.*
☞ *Pigment stones (10%): Radio-opaque, dark-brown (bilirubin+Calcium salts)*
☞ *Mixed stones (80%): radiolucent*

143. Investigation that you would like to perform:

a. USG b. HIDA Scan
c. ERCP d. CBC

☞ *USG: IOC*
☞ *HIDA scan: Gold standard*

144. Treatment of choice of the above condition is:

a. Laparotomy
b. Laparoscopic cholecystectomy
c. Open with Kocher's incision
d. None of the above

145. Which is the cause of mucocele?

a. Persistent obstruction
b. Chemical irritation
c. Bacterial infection
d. Pancreatic reflux

☞ *Mucocele of the gallbladder is due to obstruction of the cystic duct by a stone in the neck (Hartmann's pouch) of the gallbladder, without any infection or inflammation in the gallbladder. This causes absorption of all bile and secretion of mucous into the gallbladder allowing gallbladder to distend causing mucocele of the gallbladder (Hydrops of the gallbladder).*

145.a. Persistent obstruction

136.a. Asherman's syndrome	137.b. Excessive curettage	138.d. Hysteroscopy
139.d. All of the above	140. d	141.a. Venous ....
142.b. Mixed stones	143.a. USG	144.b. Laparoscopic cholecystectomy

D. A 1 year boy present to ER with acute onset of pain and swelling in the lower end of femur. O/E he looks dehydrated with a temperature of 102 ^{0}F. On local examination there is tenderness and rise of temperature.

146. What is the most likely diagnosis?

a. Fracture of lower end of femur
b. Acute osteomyelitis
c. Chronic osteomyelitis
d. Septic arthritis

147. What is the commonest organism causing it?

a. Streptococcus
b. Pneumococcus
c. Staphylococcus aureus
d. Klebsiella

☞ *Overall, most common organism in all age group for acute osteomyelitis is Staph. Aureus(60-90%)]*

148. What is the commonest site for this condition?

a. Upper end of tibia
b. Upper humerus metaphysis
c. Upper femoral metaphysis
d. Lower femoral metaphysis

Location for acute osteomyelitis is metaphysis and the sites are:

1. *Lower femur (most common)*
2. *Upper tibia*
3. *Upper femur*
4. *Upper humerus*

149. If the child presents within 48 hours to you. What is the best approach of management?

a. IV antibiotics and keep the limb mobile
b. IV antibiotics and keep the limb at rest
c. Surgical exploration and drainage
d. Oral antibiotics

Its treatment depends on duration of illness on presentation.

1. *If presents within 48 hours of onset of symptoms*
   Rest: by splint/traction
   Antibiotics continued up-to 6 weeks (IV for 2 weeks then 4 weeks oral)
   If there is no improvement after IV antibiotics for 48 hours → surgical management is to be done.
2. *For patients presenting after 48 hours of onset of symptom, surgical exploration and drainage is the mainstay of treatment*

150. What is the commonest complication?

a. Acute pyogenic arthritis
b. Pathological fracture
c. Shortening of limb
d. Chronic osteomyelitis

Answers:

136.a. Asherman's syndrome	137.b. Excessive curettage	138.d. Hysteroscopy
139.d. All of the above	140.	141.a. Venous ....
142.b. Mixed stones	143.a. USG	144.b. Laparoscopic cholecystectomy
145.a. Persistent obstruction	146.b. Acute osteomyelitis	147.c. Staphylococcus aureus
148.d Lower femoral metaphysis	149.b IV antibiotics ...	150.d. Chronic osteomyelitis

E. A 22 years old primigravida at 36 weeks of pregnancy presents to ER with convulsion, edema over whole body and BP of about 160/100 mmHg.

151. What is the probable cause for this state of this patient?

a. Pre-eclampsia
b. Eclampsia
c. Gestational hypertension with heart failure
d. Gestational hypertension

152. What is the most common type of this disorder?

a. Antepartum
b. Intrapartum
b. Postpartum
c. Intercurrent

☞ ***Antepartum (50%):*** *Fits occur before the onset of labor. More often, labor starts soon after and at times, it is impossible to differentiate it from intrapartum ones.*

☞ ***Intrapartum (30%):*** *Fits occur for the first time during labor.*

☞ ***Postpartum (20%):*** *Fits occur for the first time in puerperium, usually within 48 hours of delivery. Fits occurring beyond 48 hours but less than 4 weeks after delivery is accepted as late postpartum eclampsia.*

☞ ***Intercurrent (Antenatal):*** *When the patient becomes conscious after recovery from convulsions and the pregnancy continues beyond 48 hours. The time limit is arbitrary as a period of 7–10 days has also been mentioned.*

153. What is the convulsant of choice in this case?

a. Diazepam
b. Lorazepam

151.b. Eclampsia	152.a. Antepartum	153.d. Magnesium sulfate

c. Chlorpromazine
d. Magnesium sulfate

154. How will you manage convulsion in this patient?

a. $MgSO_4$ 5 mg IM 4 hourly in each buttock
b. $MgSO_4$ 4gmIV followed by 5 gm IM in each buttock
c. $MgSO_4$ 4 mg IV followed by 5 mg IM in each buttock
d. 1-2 mg/hr infusion $MgSO_4$

155. All of the following are indication to stop $MgSO_4$ except:

a. Urine output less than 30 ml/hr
b. Absent knee jerk
c. Respiratory rate < 12/min
d. SPO_2 without O_2<92%

This is intramuscular (Pritchard) regimen in which loading dose is 4 gm IV over 3–5 min followed by 10 gm deep IM (5 gm in each buttock) and is followed by maintenance dose of 5 gm IM 4 hourly in alternate buttock. Repeat injections are given only if the knee jerks are present, urine output exceeds 30 mL/hour and the respiration rate is more than 12 per minute. The therapeutic level of serum magnesium is 4–7 mEQ/L. Magnesium sulfate is continued for 24 hours after the last seizure or delivery whichever is later. For recurrence of fits, further 2 gm IV bolus is given over 5 min in the above regimens.

F. A 5 year old child came with loose stool and vomiting.

156. What would you like to know to treat the patient?

a. Bloody stool or not
b. Frequencyof loose stool
c. Frequency of vomiting
d. Breastfeeding or not

157. If non bloody, most common cause?

a. E. coli
b. Cholera
c. Food poisoning
d. Rotavirus

158. Which of the following statement is true about zinc?

a. Zinc given for 10-14 days
b. Given as long as diarrhea persists
c. Only for children less than 6 months
d. Same dose for all ages

159. Most important determining factors in measuring IV fluid?

a. Urine output
b. Child thirsty
c. Dry tongue
d. Skin goes back slowly

160. Treatment of Shigella dysentery is by using?

a. Azithromycin
b. Cefixime
c. Amoxicillin
d. Chloramphenicol

G. A lady comes in gynae OPD with excessive vomiting and amenorrhea for 16 weeks? Uterine height is at umbilicus.

161. What is an unlikely cause of large for GA?

a. H. mole
b. Multiple pregnancy
c. IUFD
d. Mistaken date

162. What examination will you prefer for diagnosis of above case?

a. BP and weight
b. Auscultation
c. Palpation of fetal parts
d. USG

163. In a normal pregnancy, calcium is prescribed from

a. 18 weeks
b. 20 weeks
c. 16 weeks
d. 12 weeks

164. What is the minimum number of ANC visits according to WHO?

a. 3
b. 4
c. 5
d. 6

165. The commonest presentation in twin pregnancy is

a. First vertex, second vertex
b. First vertex, second breech
c. First breech, second Vertex
d. First breech, second breech

The most common lie of the fetuses is longitudinal (90%) but mal presentations are quite common. The combination of presentation of the fetuses are—

1. *both vertex (50%)*
2. *first vertex and second breech (30%)*
3. *first breech and second vertex (10%)*
4. *both breech (10%)*
5. *first vertex and second transverse and so on,*

But rarest one, being both transverse when the possibility of conjoined twins should be ruled out.

154.b. $MgSO_4$ 4gmIV ...	155.d. SPO_2 without O2<92%	156.a. Bloody stool or not
157.b. Cholera	158.a. Zinc given for 10-14 days	159.a. Urine output
160.b. Cefixime	161.b. Multiple pregnancy	162.b. Auscultation
163.c. 16 weeks	164.b. 4	165.a. First vertex, ...

Answers:		
151.b. Eclampsia	152.a. Antepartum	153.d. Magnesium sulfate
154.b. $MgSO_4$ 4gmIV ...	155.d. SPO_2 without O2<92%	156.a. Bloody stool or not
157.b. Cholera	158.a. Zinc given for 10-14 days	159.a. Urine output
160.b. Cefixime	161.b. Multiple pregnancy	162.b. Auscultation
163.c. 16 weeks	164.b. 4	165.a. First vertex, ...

H. A 45 years old worker came to hospital with history of fever and cough for a month.

166. What is the most probable diagnosis?
- a. PTB
- b. Malaria
- c. Kala-azar
- d. None of the above

167. How will you collect sample for sputum?
- a. Morning sample
- b. Evening sample
- c. When cough arises
- d. When patient wants

168. What investigation is not done?
- a. Mantoux
- b. Widal test
- c. Chest X-ray
- d. Sputum for AFB

169. What is the treatment for it?
- a. Cat I
- b. Cat II
- c. Cat III
- d. Pyridoxine

170. Red color urine seen while under treatment with ATT is due to which drug?
- a. Isoniazid
- b. Pyrazinamide
- c. Rifampicin
- d. Streptomycin

I. A 55 year old patient has sudden severe pain in lower limb with absent pulse below knee?

171. Most probable diagnosis is?
- a. Acute popliteal artery emboli
- b. DVT
- c. Cellulitis
- d. Vericose Vein

172. Important investigation that you will want to perform?
- a. Angiography of lower limbs
- b. MRI
- c. CT
- d. Duplex ultrasound

173. What is your immediate management?
- a. Thromboembolectomy
- b. Heparin
- c. Warfarin
- d. Aspirin

174. Common source of emboli?
- a. Right atrium
- b. Left atrium
- c. Right ventricle
- d. Left ventricle

☞ *Afib is the most common source of emboli.*

175. Investigation to detect source?
- a. Popliteal angiography
- b. X-ray
- c. ECHO
- d. CT scan

J. A patient brought with cold periphery, sweating from body, miosis, lacrimation, muscle fasciculation and paralysis with wheezes all over chest?

176. What is the diagnosis?
- a. Morphine poisoning
- b. OP poisoning
- c. Mercury poisoning
- d. CO, poisoning

177. Drug of choice is?
- a. Atropine
- b. Pralidoxime
- c. Dopamine
- d. Nitroglycerine

178. Most specific investigation?
- a. Drug level
- b. USG abdomen
- c. Blood Culture
- d. Cholinesterase level

179. Which effect is not controlled by above drug?
- a. Sweating
- b. Pinpoint Pupil
- c. Muscle fasciculation
- d. Lacrimation

180. Which drug would you use for this?
- a. Steroid
- b. Dopamine
- c. Pralidoxime
- d. Antibiotics

Answers:		
166.a. PTB	167.a. Morning sample	168.b. Widal test
169.a. Cat I	170.c. Rifampicin	171.b. DVT
172.d. Duplex ultrasound	173.b. Heparin	174.a. Right atrium
175.c. ECHO	176.b. OP poisoning	177.a. Atropine
178.d. Cholinesterase level	179.c. Muscle fasciculation	180.c. Pralidoxime

❑❑❑

NMCLE - MANGSIR 2071 2071 mangshir

1. **Avascular necrosis is found in fracture of the following except;**
   a. Fracture neck of femur
   b. Scaphoid fracture
   c. Fracture of talus
   d. Intertrochanteric fracture of femur

   Avascular necrosis is disease resulting from the temporary or permanent loss of the blood supply to an area of bone. Common sites:
   Head of Femur: Commonest (Crescent sign visible in plain X-ray)
   Scaphoid (proximal pole)
   Talus (body)
   Lunate

2. **Pain that started as backache and radiated towards thigh is seen in,**
   a. Ankylosing spodylitis
   b. Sacroilitis
   c. Prolapsed inter vertebral disc
   d. Rhematoid arthritis

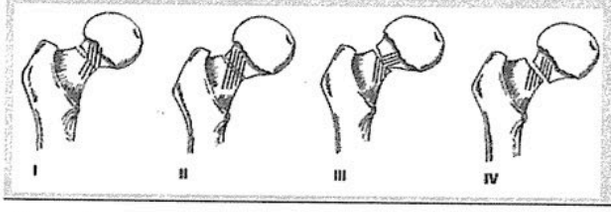
   Lowbackache +/- Sciatica is the most common symptopm of PIVD.
   Most common site: L4-L5> C5-C6 (Posterolateral protrusion)
   Most common nerve root affected L5 and C5 respectively
   In Myelography: Root cut-off sign is seen.
   Best Treatment option: Microdisectomy

3. **A child presented with h/o of trauma 1 wk back then developed swelling in upper part of tibia, diagnosed as osteomyelitis then how will you treat this case?**
   a. I/V antibiotics for 1 wk then oral for another 2 wks against staph aureus
   b. Surgery
   c. Oral antibiotics for 1 wk against staph. aureus
   d. Drainage

   *Most common organism in all age group for Osteomyelitis is **Staph aureus***
   It is almost invariably a disease of children.
   Most common site is metaphysis of long bones in children (lower end of femur > Upper end of tibia). In adults thoracolumbar spine is most common site.
   ***Sequestrum:** Hallmark of chronic osteomyelitis. It is dead piece of a bone and acts as nidus for infection. It is most common cause of non-healing sinus of chronic OM.*
   ***Involucrum:** Periosteal new bone (reactive bone) around necrotic sequestrum.*

4. **A 45 yr male presented with h/o of fall and on x-ray examination of hip neck was found to be fracture which was complete but not displaced, a/c to Gardens classification, it is**
   a. type I b. typeII
   c. typeIII d. typeIV

   ***Garden stage I** :undisplaced incomplete, including valgus impacted fractures.*
   ***Garden stage II** :undisplaced complete*
   ***Garden stage III** : complete fracture, incompletely displaced*
   ***Garden stage IV** : complete fracture, completely displaced*



5. **A male presented with h/o of fall. Then on making fist of both hands, he can't appose index and middle fingers, which nerve is damaged?**
   a. radial b. ulnar
   c. median d. axillary

   Lumbricals 1 and 2 are supplied by median nerve. Injury results into Pointing index.
   Supply of Median nerve: Flexor carpi ulnaris and medial half of flexor digitorum profundus in forearm. Flexor pollicis brevis in hand.

6. **After delivery of baby, presented with extended elbow, pronated forearm and flexed wrist then which was right,**
   a. Erb's paralysis
   b. Klumpke's paralysis
   c. axillary nerve damage
   d. radial nerve damage

1.d Intertrochanteric #	2.c PIVD	3.a IV antibiotic then oral for 2wk
4.b Type II	5.c Median	6.a Erb's palsy

- *In Erb's palsy, the arm hangs by the side of the body with elbow extended and forearm fully pronated. (**Policeman's tip** or **Porter's tip** deformity)*
- *This is because of paralysis of the abductor and external rotators of the shoulder, flexors and supinators of the elbow.*
- *Nerve root involved in Erb's palsy is **C5, C6**.*
- *It occurs due to forceful separation of head from shoulder as in Obstetric injury.*

7. **Anterior boundary of axilla is formed by**

a. pectoralis major
b. pectoralis major and minor
c. pectoralis major and subclavius
d. pectoralis minor and subclavius

- *The axillary space is shaped like a truncated pyramid. Its boundaries are:*
- ***Anterior wall:** pectoralis major and minor muscles. The lateral border of pectoralis major muscle forms the anterior axillary fold.*
- ***Posterior wall:** scapula, subscapularis muscle, teres major muscle, and latissimus dorsi muscle. The teres major muscle combines with latissimus dorsi muscle to form the posterior axillary fold.*
- ***Medial wall:** serratus anterior muscle*
- ***Lateral wall:** the floor of the intertubercular groove of the humerus.*

8. **McBurney's point is;**

a. point between medial 1/3rdand lateral 2/3rdof umbilicus ASIS at left side
b. point between medial 2/3rdand lateral 2/3rd umbilicus ASIS at left side
c. point between medial 2/3rdand lateral 1/3rdof umbilicus ASIS at right side
d. point between medial 1/3rdand lateral 2/3rdof umbilicus ASIS at right side

9. **Portal venous anastomosis is not seen in,**

a. lower end of esophagus
b. anal canal
c. bare area of liver
d. Pancreas

Region	*Name of clinical condition*	*Portal circulation*	*Systemic circulation*
Esophageal	*Esophageal varices*	*Esophageal branch of left gastric vein*	*Esophageal branches of Azygos vein*
Rectal	*Rectal Varices*	*Superior rectal vein*	*Middle rectal veins and inferior rectal veins*
Paraumbilical	*Caput medusae*	*Paraumbilical veins*	*Superficial epigastric vein*
Retroperitoneal		*Colonic veins*	*Body wall veins*
Bare area of Liver		*Hepatic/portal veins*	*Inferior phrenic veins*

10. **A patient presented with midline neck swelling, on examination multinodular cyst was found and all thyroid functions are normal, which is right?**

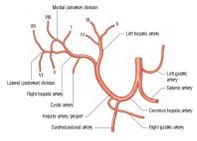
a. papillary carcinoma
b. follicular carcinoma
c. goiter
d. Hashimoto's thyroiditis

11. **Which of the following is used in acute esophageal varices**

a. propranolol b. frusemide
c. nitrate d. octreotide

- *Octreotide is used to reduce the portal pressure when endoscopy is not immediately available. It is used in case of bleeding varices.*
- *A loading dose of 100μg IV followed by infusion at 50 μg/hr for 48-72 hrs.*
- *Propanolol is used in prevention of recurrent variceal bleeding. It is used in esophageal varices that is not bleeding. Dose: 10-20 mg 8hrly.*

12. **Cystic artery is a branch of,**



a. Right gastric artery
b. left gastric artery
c. Right hepatic artery
d. left gastroepiploic artery

- *Cystic artery originating from right hepatic artery passes behind the common hepatic artery, enters the Calot's triangle.*

13. **A pt. is undergone appendectomy and on specimen examination adenocarcinoma was seen then,**

a. left as it was
b. right hemicolectomy
c. left hemicolectomy
d. total colectomy

PART-19

7.b Pectoralis major and minor | 8.d medial 1/3 lat 2/3 | 9.d Pancreas
10.c Goiter | 11.a Propranolol | 12.c Rt hepatic artery
13.b Rthemicolectomy

14. **Strawberry sign is seen in,**
   a. porcelain gallbladder
   b. chronic cholecystitis
   c. cholesterolosis
   d. mucocele of gallbladder

- *Aggregations of cholesterol crystals in the mucosa or submucosa is cholesterosis.*
- *It is a premalignant condition*
- *Cystic Duct is normal and the disease occurs only in gall bladder.*

15. **An alcoholic pt. presented with severe epigastric pain which radiates to back, his BP was 80/40 mm of hg and pulse is 125b/min then your diagnosis is,**
   a. Acute cholecystitis
   b. Acute pancreatitis
   c. Peptic ulcer
   d. Acute appendicitis

- *M/c cause → gall stones (cholelithiasis). Other imp causes are alcoholism, hypertriglyceridemia, DM, ERCP. M/c cause in children → trauma*
- *Mechanism → autodigestion. Activation of proteclytic enzymes esp trypsin and phopholipases are responsible.*
- *M/c symptom → abdominal pain in epigastrium and radiates to back.*
- *O/e there is low grade fever, tachycardia, hypotension. (periumbilical light bluish discoloration d/to hemoperitoneum), and Grey Turner's sign (dark bluish/ greenish discoloration of flanks) may be seen.*

16. **A child presented severe left earache for 4 days, O/E tympanic membrane was found tensed, parents also gave h/o of pharyngitis 5 days back, what is your diagnosis?**
   a. Chronic otits media
   b. Acute otitis media
   c. Acute otitis externa
   d. Radiating pain

17. **A child presented with decreased hearing at right ear with itching, O/E Whitish mass is seen on EAC, your diagnosis is,** EAC: external auditory canal
   a. acute otitis externa
   b. otomycosis
   c. foreign body
   d. mucormycosis

OTOMYCOSIS

- *MC due Aspergillus niger; external canal is filled with wet debris or flakes resembling wet news paper/blotting paper; musty odor; keep ear clean and dry, Tx: suction clearance and antifungal ear drops*

18. **A 2 yrs old child presented with elongated face, prominent and crowded upper teeth, high arched palate then your diagnosis is**
   a. foreign body at nose
   b. Hypertrophied adenoids
   c. Mass at the tongue
   d. Acute pharyngitis

Features of adenoids hypertrophy

- *Nasal symptoms: B/L nasal obstruction, discharge, sinusitis, epistaxis, voice change*
- *Aural Symptoms: ET obstruction, AOM, CSOM, Serous otitis media.*
- *General Symptoms: Adenoid facies, Pulmonary HTN, Lack of concentration (Aprosexia)*
- *Adenoid facies: Characteristic face due to chronic nasal obstruction and nasal breathing.*
- *Elongated face with dull expression, open mouth, prominent and crowded upper teeth, hitched up upper lip.*
- *High arched palate because the moulding action of tongue plate is lost.*

19. **In developed countries for cataract surgery, which one is followed,**
   a. SICS
   b. ECCE
   c. ICCE
   d. Phacoemulsification

20. **Schwalbe's ring corresponds to which of the following structure?**
   a. Corneal Epithelium b. Schlemm canal
   c. Descmet's membrane d. Ciliary body

- *Schwalbe's ring is the thickened peripheral margin of the Descemet's membrane of the cornea of the eye and it is formed by a circular bundle of connective tissue.*

ANSWERS

1.d Intertrochanteric #	2.c PIVD	3.a IV antibiotic then oral for 2wk
4.b Type II	5.c Median	6.a Erb's palsy
7.b Pectoralis major and minor	8.d medial 1/3 lat 2/3	9.d Pancreas
10.c Goiter	11.a Propranolol	12.c Rt hepatic artery
13.b Rthemicolectomy	14.c cholesterolosis	15.b Acute pancreatitis
16.b Acute otitis media	17.b otomycosis	18.b Hypertrophied adenoids
19.d Phacoemulsification	20.c Descmet's membrane	

21. In trachoma, SAFE Strategy followed by WHO is,

a. Sanitation, antibiotics, facial cleanliness, environmental sanitation
b. surgery, antibiotics, facial cleanliness, environmental sanitation
c. Sanitation, antibiotics, free organisms, environmental sanitation
d. Surgery, antibiotics, free organisms, environmental sanitation

22. Marked analgesia is produced by,

a. Halothane b. Nitrous oxide
c. Isoflurane d. Sevoflurane

- *No analgesia: Halothane*
- *Profound analgesia (IV) : Ketamine*
- *Maximum analgesia :Trielene*
- *Only analgesia: N_2O*

23. In shock patients drug of choice in anesthesia is,

a. Propofol b. Ketamine
c. STP d. Halothane

- *Ketamine causes tachycardia stimulating sympathetic system and hypertension.*
- *Thus, DOC for hypovolemic shock and C/I in hypertension.*
- *Similarly it stimulates respiration and is potent bronchodilator → DOC in Asthma.*

24. A child known case of asthma presented with generalized pruritus with scaly papules all over the body, your diagnosis is,

a. Atopic dermatitis
b. Seborrhic dermatitis
c. Psoriasis
d. Contact dermatitis

- *h/o of atopy. Pruritus is hallmark of Atopic dermatitis.*
- *Excoriation, lichenification. Hyperlinear palms are seen.*
- *Dennie's line are seen.*

25. An 8 year girl presented with 5cm macules over left nasal side for 8 months, sensation was intact, your diagnosis is

a. Leprosy b. Lupus vulgaris
c. Viral infection d. None

- *Asymmetrical macule : Leprosy*
- *Lupus vulgaris present with nodules*
- *Viral infections: Vesicular rash*

26. A 45 year old male presented with painless and indurated ulcer at glans penis,which investigation will you prefer,

a. Culture from ulcer site
b. Electron microscopy
c. Dark field microscopy
d. AFB staining

- *Syndromic approach: For genital ulcers think of Syphilis, herpes, donovanosis and Chancroid*
- *Painless ulcers: Donovanosis (No LNpathy), Syphilis, LGV (LNpathy)*
- *Painful ulcers: Herpes (multiple vesicles, B/L LN), Chancroid (Suppurative, U/L LN)*

27. Gallow's traction is used in femur fracture of age group;

a. Below 2 months b. Below 2 yrs
c. 2- 12 yrs d. >12yrs

28. A 25 yrs old male presented with inability to extend right wrist after fall then which of the following nerve is injured,

a. Median b. Radial
c. Ulnar d. Posterior interossei

- *Radial nerve supplies all muscles in posterior compartment of arm, forearm and hand.*
- *Injury to radial nerve affects extension movement of forearm and hand→ Wrist drop*
- *Important muscles supplies by radial nerve: Brachioradialis, Extensors, Supinator, Triceps (@BEST)*

29. A patient is suffering from thinking disorder then which one is correct?

a. OCD b. Schizophrenia
c. mania d. phobia

First rank symptoms in schizophrenia:

- *Hallucination*
- *Delusional Perception*
- *Thought Alienation phenomenon: Thought withdrawal, Thought insertion, Thought broadcasting*
- *Passivity Phenomenon*

30. A 2 yrs child presented with fever and cough for 7 days, O/E Respiratory rate was 45/min, sub costal retraction, added sounds on auscultation, your diagnosis is,

a. pneumonia b. severe pneumonia
c. Bronchiolitis d. Bronchialasthma

- *Fever, Cough, Tachypnea → Pneumonia*
- *Fever, Cough, Tachypnea + Subcostal retraction → Severe pneumonia*
- *Tachypnea in children above 12 months to 5 years is 40/min.*

PART - 19

21.b surgery, antibiotics...	22.b Nitrous oxide	23.b Ketamine
24.a Atopic dermatitis	25.a Leprosy	26.a Culture from ulcer site
27.b Below 2 yrs	28.b Radial	29.b Schizophrenia
30.b severe pneumonia	31.b PEM	32.c PEM

31. **Marasmus is due to,**
    a. Infection
    b. Protein energy malnutrition
    c. Infestation
    d. none

32. **A 2yrs child of 6.7 kg presented with generalized edema started from face and with grey and brittle hair, your diagnosis is.**
    a. Nephrotic syndrome
    b. Liver failure
    c. PEM
    d. CCF

    - *By the age of 2ys weight of the baby must have quadrupled. i.e 12kg.*
    - *Edema is also a feature of PEM (Kwashiorkor). Grey and Brittle Hair are also feature of PEM*

33. **Which of the following pair is incorrect?**
    a. Janway's lesion-infective endocarditis
    b. Roth's spot-AR
    c. Osler's nodules-bacterial endocarditis
    d. Subcutaneous nodules-rheumatic fever

    - *Features of Infective Endocarditis: Fever, Roth spots, Osler nodes, Murmur, Janeway lesions, Anemia, Nail-bed hemorrhage, Emboli @ FROM JANE*

    JONES (major criteria) for Rheumatic Fever :

    - *Joint (migratory polyarthritis)*
    - *♥(carditis)*
    - *Nodules in skin (subcutaneous)*
    - *Erythema marginatum*
    - *Sydenham chorea* ***@ J♥NES***

34. **A 7 yrs child presented with massive generalized edema on urine examination protein is 4+,BP was normal, what is your diagnosis,**
    a. Nephritic syndrome
    b. Nephrotic syndrome
    c. UTI
    d. none

    Nephrotic Syndrome:

    - *Proteinuria (>3.5 g/1.73m²/day)*
    - *Hypoalbuminemia*
    - *Edema*
    - *Hyperlipidemia*
    - *Lipiduria*
    - *Hypercoagulability*

35. **For which of the following abscess, GA is not required?**
    a. Breast abscess b. parotid abscess
    c. Ischiorectal abscess d. Axillary abscess

    - *Mastitis is treated with oral antibiotics alone, whereas incision and drainage is needed to drain a true abscess.*

36. **An 8 yr old child presented with 12 episodes of diarrhea and oliguria, on urine examination, urea -30 mmol, creatinine 200 mmol, k-6mmol, what is your diagnosis,**
    a. Severe dehydration
    b. Acute renal failure
    c. Chronic renal failure
    d. Infective diarrhea

37. **In Hirschprung's disease, aganglionic part is,**
    a. Jejunum b. Ileum
    c. Rectum d. Colon

    - *Developmental disorder of the enteric nervous system such that there are absence of ganglion cells in the submucosal and myenteric plexus*
    - *Arrest of neuroblast migration from proximal to distal bowel → inadequate relaxation and hypertonicity*
    - *Most common cause of Intestinal obstruction in neonate.*
    - *80% are short (rectosigmoid), 10-15% long (more than that), 5% total bowel, aganglionosis*

38. **A 1 yr old child presented with 7 episodes of diarrhea and 4 episodes of vomiting, O/E child is irritable but drinks eagerly, eye is sunken, tongue is dry, your management plan will be,**
    a. Ringers lactate immediately
    b. Breastfeeding only
    c. NS immediately
    d. ORS 75ml/kg initially along with breastfeeding continuity

30.b severe pneumonia	31.b PEM	32.c PEM
33.b Roth's spot-AR	34.b Nephrotic syndrome	35.a Breast abscess
36.b Acute renal failure	37.c Rectum	38.d ORS 75ml/kg
39.c corticosteroids	40.a 1st trimester	

		No dehydration	Some Dehydration	Severe Dehydration
Look at	Condition	Well alert	"Restless, irritable"	"Lethargic or unconscious—floppy"
	Eyes	Normal	Sunken	Very sunken and dry
	Tears	Present	Absent	Absent
	Mouth and tongue	Moist	Dry	Very dry
	Thirst	Drinks normally, not thirsty	"Thirst, drinks eagerly"	"Drink poorly or not able to drink"
	Skin pinch	Goes back quickly	Goes back slowly	Goes back very slowy
	Urine output	Normal	Oliguria	Severe oliguria or anuria
Decide		No signs of dehydration	=>2 signs (at least one " sign")– some dehydration	=>2 signs (at least one " sign")---- severe dehydration
Ttreatment		**Plan A**	**Plan B**	**Plan C**

- *The child has presented with **some signs of dehydration** so manage according to Plan B i.e. 75ml/kg ORS in 1st 4 hrs and then encourage breast feeding.*

39. Which of the following drug is useful in prevention of respiratory distress syndrome,

a. Calcium b. Iron
c. corticosteroids d. Folic acid

Primary prevention of RDS:

- *Avoid prematurity (tocolytics)*
- *Antenatal corticosteroid*

A complete course is two IM 12-mg doses of beta methasone given 24 hours apart OR four IM 6-mg doses of dexamethasone given 12 hours apart.

40. Folic acid in prevention of neural tube defects is given in,

a. 1st trimester
b. 2nd trimester
c. 3rd trimester
d. Throughout pregnancy

ANSWERS

21.b surgery, antibiotics...	22.b Nitrous oxide	23.b Ketamine
24.a Atopic dermatitis	25.a Leprosy	26.a Culture from ulcer site
27.b Below 2 yrs	28.b Radial	29.b Schizophrenia
30.b severe pneumonia	31.b PEM	32.c PEM
33.b Roth's spot-AR	34.b Nephrotic syndrome	35.a Breast abscess
36.b Acute renal failure	37.c Rectum	38.d ORS 75ml/kg
39.c corticosteroids	40.a 1st trimester	

41. Tocolytic drug which causes increased BP is,

a. $MgSO_4$ b. Nefidipine
c. indomethacin d. Terbutaline

Magnesium sulfate

- *Side effects include muscle weakness, respiratory depression, and pulmonary edema. Magnesium overdose is treated with IV calcium gluconate.*
- *Contraindications include renal insufficiency and myasthenia gravis.*
- *β-Adrenergic agonists include terbutaline*
- *Cardiovascular side effects (hypertension, tachycardia) are from b1 receptor cardiovascular activity. Other side effects are hyperglycemia, hypokalemia, and pulmonary edema.*
- *Contraindications include cardiac disease, diabetes mellitus, uncontrolled hyperthyroidism.*
- *Calcium-channel blockers (e.g., nifedipine).*
- *Side effects include tachycardia, hypotension, and myocardial depression.*
- *Contraindications include hypotension.*
- *Prostaglandin synthetase inhibitors decrease smooth muscle contractility by decreasing prostaglandin production (e.g., indomethacin).*
- *Side effects include oligohydramnios, in utero ductus arteriosus closure, and neonatal necrotizing enterocolitis.*
- *Contraindications include gestational age >32 weeks.*

42. A child presented with fever for 7 days, O/E neck rigidity present, kerning's sign present, on CSF analysis lymphocyte count increased with neutrophils-80%, glucose-

41.d Terbutaline	42.a acute pyogenic meningitis	43.b 14-16wks

20mg/dl,protein120mg/dl, what will be your diagnosis,

a. acute pyogenic meningitis
b. Acute viral meningitis
c. Tuberculous meningitis
d. Fungal meningitis

43. Best time to detect anatomical abnormality in fetus is,

a. 10-12 wks b. 14-16wks
c. 18-20 wks d. >20 wks

44. Commonest complication of measles in children is,

a. AOM b. Pneumonia
c. SSPE d. Bronchitis

☞ *Complications of measles—otitis media (most common), pneumonia, encephalitis*

45. A 10 yrs old child presented with fever, neck rigidity and altered sensorium. On CSF analysis cells are polymorphs, glucose is30mg/dl, protein is 95mg/dl then what will be your diagnosis,

a. Bacterial meningitis
b. Viral meningitis
c. Encephalitis
d. Tuberculous meningitis

Typical CSF Findings in Meningitis

Type	Appearance	Pressure (cm H_2O)	WBC/mm^3 *Predom type*	Glc (mg/dL)	TP (mg/dL)
Normal	Clear	9–18	0–5 *lymphs*	50–75	15–40
Bacterial	Cloudy	18–30	100–10,000 *polys*	<45	100–1000
TB	Cloudy	18–30	<500 *lymphs*	<45	100–200
Fungal	Cloudy	18–30	<300 *lymphs*	<45	40–300
Aseptic	Clear	9–18	<300 *polys → lymphs*	50–100	50–100

46. A patient presented with ascending paralysis from lower to upper limbs, on CSF examination protein was elevated, how will you treat this case?

a. Prednisolone
b. i/v Immunoglobulin
c. Physiotherapy
d. Antibiotics

Guillain-barré syndrome (GBS)

☞ *Muscles weakness is relatively symmetrical, usually proximal, begins in legs and progresses to arms (ascending) mild begins in legs and progresses to arms (ascending) mild distal sensory loss.*

☞ *Areflexia (DTR lost), sphincters are spared.*

Lab:-↑ in csf protein without ↑ in cells (no pleocytosis).

Albumino - cytologic dissociation.

☞ *Treatment: IV immunoglobulin and plasmapheresis are equally effective treatments. There is no benefit to combination therapy. Glucocorticoids are not effective in the treatment of acute GBS.*

47. Which of the following doesn't mark severity of bronchial asthma?

a. Use of accessory muscles
b. Pulsus paradoxus
c. Hypertension
d. Dyspnea

Features	Mild	Moderate	Severe
Colour	Normal	Normal	Normal
Dyspnea	Absent	Moderate	Severe
Accessory muscles	No	Chest indrawing	Chest indrawing
Pulsus paradoxus	<10mm	10-20mm	>20mm
SaO2	>95%	90-95%	<90%
PEFR	>80%	60-80%	<60%

41.d Terbutaline	42.a acute pyogenic meningitis	43.c [redacted] c. 18-20
44.a AOM	45.d Tuberculous meningitis	46.b IV Ig
47.c HTN	48.b K+	49.b Hyperkalemia

47.c HTN	48.b K+	49.b Hyperkalemia
50.b Mg	51.a Head Injury	52.c Dopamine
53.b Atropine	54.a Lorazepam	55.b Occlusion of respi tract

48. In Addison's disease, which of the following is retained?

a. Na^+ b. K^+
c. Cl^- d. Water

☞ *Laboratory findings in Addison's Disease : neutropenia, lymphocytosis, and eosinophilia; elevated serum potassium and urea nitrogen; low sodium; low blood glucose; and morning low plasma cortisol.*

49. A patient presented with muscle weakness and in ECG there is peaked tall T waves, what will be your diagnosis?

a. Hyponatremia b. Hyperkalemia
c. Hypokalemia d. Hypernatremia

50. Which of the following isn't the constituent of Ringers lactate?

a. Na b. Mg
c. Ca d. Cl

One liter of Ringer's lactate solution contains:

☞ *sodium ion = 130 mmol/L*
☞ *chloride ion = 109 mmol/L*
☞ *lactate = 28 mmol/L*
☞ *potassium ion = 4 mmol/L*
☞ *calcium ion = 1.5 mmol/L*

51. Glasgow coma scale is used in assessment of consciousness in injury of,

a. Head injury b. Abdominal injury
c. Splenic injury d. Limbs injury

52. In case of shock, which drug is used?

a. Noradrenaline b. Adrenaline
c. Dopamine d. Acetylcholine

53. In case of mushroom poisoning, which of the following antidote is used?

a. Physostigmine b. Atropine
c. Naloxone d. Flumazenil

☞ *Atropine is used as antidote in both OP poisoning and mushroom poisoning.*
☞ *For other antidotes please refer review notes in forensic medicine.*

54. In which of the following, addiction may occur in frequent use,

a. Lorazepam b. Aspirin
c. Paracetamol d. Enalapril

55. In hanging, death with asphyxia is due to,

a. Larynx compression
b. Occlusion of respiratory tract due to base of tongue
c. Cervical fracture
d. Tracheal compression

56. A 36 yr old female patient presented with bilateral abdominal mass, after surgery, it was found as cystic ovarian tumor. on histology a small apical mucin producing cell was seen, what will be your diagnosis?

a. Fibroid
b. Serous cyst adenoma
c. Teratoma
d. Mucinous cyst adenoma

☞ *Mucinous cyst adenoma is the largest benign ovarian tumor.*
☞ *Arises from totipotent surface epithelium of ovary.*
☞ *20-25 % of all ovarian tumors, B/L in 10% cases.*

57. A G3P2 presented with 40 wks of period of gestation with lower abdominal pain, O/E her Bishop's score was 3 then what will be your management plan further?

a. AROM
b. Oxytocin drip
c. Sweep the membrane and wait
d. wait and watch

☞ *Sweeping the membrane helps in release of prostaglandins from the membrane and decidua.*
☞ *Manual exploration of the cervix triggers Ferguson reflex which promotes oxytocin release from maternal pituitary.*
☞ *Sweeping of the membranes is done prior to ARM. It is simple, safe and beneficial for induction of labor.*
☞ *It also helps in ripening the cervix*

58. A primigravida presented with lower abdominal pain and per vaginal leakage, O/E head was engaged, in this case engagement means,

a. Fitting of biparietal diameter in pelvic inlet
b. Fitting of bimastoid diameter in pelvic inlet
c. Fitting of biparietal diameter in pelvic outlet
d. Fitting of biparietal diameter in mid pelvis

☞ ***Engagement:*** *When the greatest horizontal plane, the biparietal, has passed the plane of the pelvic brim, the head is said to be engaged.*

59. A patient has BP 110/80 mm of Hg, what will be the mean arterial pressure?

a. 102 mm of Hg b. 90mm of Hg
c. 85mm of Hg d. 87mm of Hg

56.d Mucinous cyst adenoma	57.c Sweep...	58.a biparietal into pelvic inlet
59.b 90 mm Hg	60.b Deep inguinal ring	

MAP = [(2 x diastolic) + systolic] divided by 3.

The reason that the diastolic value is multiplied by 2, is that the diastolic portion of the cardiac cycle is twice as long as the systolic.

60. An important landmark for hernia in which mid inguinal point is taken as a point, near this .....opens,

a. Superficial inguinal ring
b. Deep inguinal ring
c. Femoral ring
d. None

ANSWERS		
41.d Terbutaline	42.a acute pyogenic meningitis	43.b 14-16wks
44.a AOM	45.d Tuberculous meningitis	46.b IV Ig
47.c HTN	48.b K+	49.b Hyperkalemia
50.b Mg	51.a Head Injury	52.c Dopamine
53.b Atropine	54.a Lorazepam	55.b Occlusion of respi tract
56.d Mucinous cyst adenoma	57.c Sweep...	58.a biparietal into pelvic inlet
59.b 90 mm Hg	60.b Deep inguinal ring	

61. In femoral canal, which of the following lies,

a. Femoral vein
b. Femoral nerve
c. Femoral artery
d. Lymph node of cloquet

Contents of Femoral Canal: Fat, Lymphatic vessels, Lymph node of cloquet

Contents of Femoral triangle: Femoral nerve, Femoral artery, Femoral vein, Lateral cutaneous nerve, Femoral branch of genitofemoral nerve, Lymphatic vessels

Compartments of Femoral Sheath:
Lateral Compartment : Femoral artery
Intermediate compartment: Femoral Vein
Medial compartment: Femoral canal
→@VAN from medial to lateral vein, artery, nerve

62. In which of the following intracranial condition, trauma % is necessary?

a. Epidural hematoma
b. Subdural hematoma
c. Subarachnoid hemorrhage
d. Infratentorial hemorrhage

63. What is infective stage of schistosomiasis?

a. Cercariae b. Miracidia
c. Schistosomulae d. Adult stage

Eggs hatch → Miracidia→ penetrate snail → 2 generation of sporocysts → Cercariae produced that is released from snail and penetrate human skin→ shed their tail and become schistosomulae → Adult worms midrate through several tissue and reside in veins.

Cercariae released by snail in water and free-swimming is infective.

64. Which of the following isn't transmitted by mosquito?

a. Malaria b. Kalazar
c. dengue d. Filariasis

Diseases transmitted by mosquitoes include: malaria, dengue, West Nile virus, chikungunya, yellow fever, filariasis, Japanese encephalitis, Zika fever

65. Which has maximum resistance?

a. Capillaries b. Arterioles
c. Venules d. IVC

66. Which is the drug used in kalazar?

a. artesunate b. Miltifosine
c. Chloroquine d. Ciprofloxacin

Drugs used in Kalazar:

Antiparasitic pentavalent antimonial agents (Sodium Stibogluconate)

Liposomal amphotericin B

Oral miltefosine

Pentamidine

Other agents like dapsone, fluconazole, ketoconazole

Antibiotics in concurrent systemic illness, local infection

67. Which of the antitubercular drug crosses blood brain barrier?

a. Rifampicin b. Streptomycin
c. Ethambutol d. Isoniazide

Amongst the essential antituberculosis agents isoniazid has the best CSF pharmacokinetics reaching peak concentrations only slightly less than in blood.

Pyrazinamide also has good CSF penetration and in children receiving dosages of 40 mg/kg the CSF exceeds the proposed minimal inhibitory concentration of 20 µg/ml.

Streptomycin other aminoglycosides and ethambutol have poor CSF penetration and cannot be agents of first choice for TB Meninges treatment.

- *Rifampicin at dosages used in adults seldom reaches CSF concentrations exceeding MIC, but does so more frequently in children when dosages of up to 20 mg/kg are used.*
- *The non-essential agents ethionamide, the fluoroquinolones, with the exception of ciprofloxacin, and cycloserine (terizadone) have relatively good CSF penetration and are recommended for TB Meninges treatment.*

68. A 22 year old patient from Birgunj presented with fever with rigor and chills for 10 days, O/E mild splenomegaly and hb is 9.08gm, what will be your diagnosis?

a. Enteric fever
b. Malaria
c. Hookworm infestation
d. ITP

69. In newborn HIV is diagnosed by,

a. PCR
b. Western blot
c. VDRL
d. CD4 count

Diagnosis of HIV in newborn

- *Detection of HIV DNA or RNA by PCR.*
- *HIV culture*

68.b Malaria | 69.a PCR

- *HIV p24 antigen*
- *Immune complex dissociated p24 antigen*

IgG ELISA not helpful for diagnosis till 10 months of age.

70. In Asherman's syndrome patient presented with,

a. Metrorragia
b. Amenorrhea
c. Hypermenorrhea
d. Menorrhagia

- *Asherman syndrome is adhesion or synechiae formation due to endometrial ulceration, alblation etc.*
- *Secondary Amenorrhoea is seen. Affects fertility.*

71. Most of the head and neck carcinoma are,

a. Adenocarcinoma
b. Squamous cell carcinoma
c. Transitional cell carcinoma
d. Small cell carcinoma

72. Sterile pyuria is seen in,

a. UTI
b. Renal tuberculosis
c. Perinephric abscess
d. Cystitis

- *Pyuria is a highly sensitive indicator of UTI.*
- *Pyuria is demonstrated in nearly all acute bacterial UTIs and its absence calls the diagnosis into question.*
- *Sterile pyuria is pyuria in absence of bactriuria and indicates infection with unusual agents such as M. tuberculosis, U. urealyticum, Trachomatis, Fungi*
- *Sterile pyuria may also be documented in noninfectious urologic conditions such as calculi, anatomic abnormality, nephrocalcinosis, VUR, polycystic disease.*

73. If a patient survives after declaring death, which is called then,

a. Invalid
b. Professional misconduct.
c. Acts as circumstantial evidence
d. None

74. Prevalence is,

a. Calculated by case control study
b. All the new cases found in specified population in specified time
c. Incidence and prevalence is equal if incubation period is very short
d. None

- *Prevalence: total current (old + new) cases in a defined population during a specified time period*

$$\text{Prevalence} = \frac{\text{total cases in population at a given time}}{\text{total population}} \times 100$$

Is a proportion (not a ratio)

Can be determined by cross sectional study

- *Relation between incidence and prevalence (given that population is stable and incidence & duration are unchanging): Prevalence (P) ≈ incidence rate (I) × average disease duration (D); where*
- *Prevalence describes balance between incidence, mortality and recovery in a community.*
- *Incidence reflects causal factors.*
- *Duration reflects the prognostic actors.*
- *On the basis of this relation;*
- *Prevalence > incidence for chronic diseases (e.g. diabetes)*
- *Prevalence = incidence for acute disease (e.g. common cold)*

75. Blood supply of nasal septum by all except,

a. Superior labial artery
b. Anterior ethmoidal artery
c. Angular artery
d. Greater palatine artery

- *The nasal septum derives its blood supply from the sphenopalatine and the anterior and posterior ethmoid arteries with the added contribution of the*

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70.b Amenorrhea	71.b Sq cell carcinoma	72.b Renal tuberculosis
73.c Acts as circumstantial evidence	74.c Incidence and prevalence is equal if	75.c Angular artery

superior labial artery (anteriorly) and the greater palatine artery (posteriorly).

Arterial supply to the nose may be principally divided into

(1) Branches from the internal carotid, namely the branches of the anterior and posterior ethmoid arteries from the ophthalmic artery, and

(2) Branches from the external carotid, namely the sphenopalatine, greater palatine, superior labial, and angular arteries.

- ***Little's area/Keisselbach's plexus/ locus valsalvae plexus** located in **antero-inferior part of septum** (Supplied by both external and internal carotid arteries) formed by **(LEGS)**:*
- *Superior **L**abial A, and*
- *Anterior **E**thmoid A, and*
- *Septal branch of **G**reater palatine A.*
- *Septal branches of **Sphenopalatine A. (artery of epistaxis)***

76. A patient presented with trauma over face and you suspected nasal bone fracture at left side then what type of x-ray will you advise,

a. X-ray PNS (water's view)
b. Lateral view of suspected side
c. Anteroposterior view
d. X-ray skull (Towne's view)

- *Best detected on lateral view. Sensitivity is 80%*
- *Water's view is useful in accessing the Nasal arch.*
- *It is to be noted that cartilaginous injury can't be detected radiologically and imaging of simple nasal bone # adds little to patient management.*

77. A 9 year old boy presented with fever and cough for 10 days and there was also subconjuntival hemorrhage, what is your diagnosis,

a. Measles b. Typhoid
c. Whooping cough d. Tetanus

78. Sudden painless loss of vision is due to,

a. Optic atrophy
b. **Central retinal artery occlusion**
c. Cataract
d. Diabetic retinopathy

Causes of Sudden painless loss of vision

- *Central Retinal artery occlusion*
- *Massive vitreous hemorrhage.*
- *Retinal Detachment involving macular area*
- *Ischemic Central Retinal Vein occlusion*

Causes of sudden painful loss of vision

- *Acute Congestive glaucoma*
- *Acute Iridocyclitis*
- *Chemical and mechanical injuries to eyeball.*

79. Commonest position of vermiform appendix is,

a. Pelvic b. Retrocaecal
c. Subcaecal d. Paracolic

Common appendix positions:

- ***Retrocaecal 74%***
- *Pelvic 21%*
- *Paracaecal 2%*
- *Subcaecal 1.5%*
- *Preileal 1%*

80. Which of the following is correct about Meckel's Diverticulum?

a. It arises from anterior border of colon
b. It contains all layers of the gut
c. Causes massive per rectal bleeding
d. Presents with abdominal mass

- *M/c cause of lower GI bleeding in infants and children.*
- *Remnant of omphalomesenteric duct (or peristent proximal part of VID) which presents as an out pouching of distal ileum.*
- *Lies on the antimesenteric border.*
- *MD is a congenical diverticulum so it has all the 3 layers of intestine (True diverticulum).*
- *Affects infants and children < 2 yrs.*
- *Rule of 2 for MD:*
  - *Affects < 2 yrs*
  - *Affects 2% population*
  - *Usually 2" long, usually 2 ft proximal to ileocecal junction.*
- *M/c site for ectopic gastric tissue is MD. Oxyntic cells in its mucosa may secrete acid → produce peptic ulceration & perforation.*
- *Inflammation may lead to symptoms like appendicitis.*

ANSWERS

61.d LN of cloquet	62.a Epidural hematoma	63.a Cercariae
64.b Kalazar	65.b Arterioles	66.b Miltifosine
67.d Isoniazide	68.b Malaria	69.a PCR
70.b Amenorrhea	71.b Sq cell carcinoma	72.b Renal tuberculosis
73.c Acts as circumstantial evidence	74.c Incidence and prevalence is equal if	75.c Angular artery
76.b Lateral view	77.c Whooping cough	78.b CRAO
79.b Retrocaecal	80.b .. contains all layers..	

Foramen of Monro
Aqueduct of Sylvius
Foramina of Magendie & Luschka

81. CSF from 4th ventricle with spinal cord communicates through,

a. Foramen of Monro
b. Foramen of Luskha and Magendie
c. Arachnoid villi
d. Aqeduct of Sylvius

Flow of CSF:

- *Lateral ventricles--> foramen of Monro third ventricle --> aqueduct of Sylvius --> fourth ventricle --> foramina of Magendie and Luschka --> subarachnoid space over brain and spinal cord --> reabsorption into venous sinus blood via arachnoid granulations*

82. In Brown-Sequard syndrome, which of the following will happen about pain touch temperature and vibration?

a. pain, temperature, touch and vibration lost on the same side
b. pain, touch temperature on contralateral side and vibration ipsilateral side
c. pain, touch and temperature on contralateral side
d. pain, touch and temperature on ipsilateral side and vibration on contralateral side

Brown-Sequard syndrome

- *Hemisection of the cord results in a lesion of each of the 3 main neural systems: the principal upper motoneuron pathway of the corticospinal tract, one or both dorsal columns, and thespinothalamic tract.*
- *The hallmark of a lesion to these 3 long tracts is presentation with2 ipsilateral signs and 1 contralateral sign.*
  - *Lesion of the corticospinal tract results in an ipsilateral spastic paresis below the levelof the injury.*
  - *Lesion to the fasciculus gracilis or cuneatus results in an ipsilateral loss of joint positionsense, tactile discrimination, and vibratory sensations below the lesion.*
  - *Lesion of the spinothalamic tract results in a contralateral loss of pain and temperature sensation starting 1 or 2 segments below the level of the lesion.*
- *At the level of the lesion, there will be an ipsilateral loss of all sensation, including touchmodalities as well as pain and temperature, and an ipsilateral flaccid paralysis in muscles supplied by the injured spinal cord segments.*

83. Massive spleenomegaly is seen in,

a. AML b. ALL
c. CML d. CLL

The causes of massive splenomegaly (spleen >1000 g) include:

- *visceral leishmaniasis (kala-azar)*
- *chronic myelogenous leukemia*
- *myelofibrosis*
- *malaria*
- *splenic marginal zone lymphoma*

splenic cm ml

84. Thiamine is type of,

a. Vit.C b. Vit.B
c. Vit.D d. Vit.A

85. Deficiency of vitamin C causes,

a. BeriBeri b. Osteomalacia
c. Scurvy
d. Megaloblastic anemia

86. Standard deviation is,

a. Square root of variance
b. Square root of square of variance
c. Square of variance
d. None

87. Which is cyanotic heart disease?

a. ASD b. VSD
c. TOF d. PDA

Classification of Congenital Heart disease:

- *Left to Right Shunts (Acyanotic) : ASD, VSD, PDA*
- *Right to left Shunts (Cyanotic) :Tetralogy of Fallot, Transposition of great vessles, Tricuspid valve atresia, TAPVC, Persistent Truncus arteries, Ebstein Anomaly*
- *Obstructive lesions: Coarction of Aorta, Aortic Stenosis, Pulmonary Stenosis*

88. Commonest organism to cause UTI is?

a. Salmonella b. E.coli
c. Staph. aureus d. Klebsiella

89. Commonest organism to cause osteomyelitis in patient suffering from sickle cell anemia is,

a. Staph.aureus b. Streptococcus
c. Salmonella d. E.coli

90. Beir's block means,

a. Subarachnoid block
b. Epidural block
c. Local nerve block
d. Regional nerve block

81.b Foramen of Luskha and Magendie	82.b pain,touch, temp in C/l vibration in I/l	83.c CML
84.b Vit B	85.c Scurvy	86.a Sq root of variance
87.c TOF	88.b E.coli	89.c Salmonella
	90.d Regional nerve block	

96.a Definitive Host	97.d 12-15 yrs	98.b Partial Hanging
99.d Compression of parasympathetic chain	100.c Acute congestive glaucoma	

- *Bier's block is also known as IV regional block.*
- *After applying tourniquet, 30 to 40 ml of 0.5% xylocaine, prilocaine or ropivacaine is injected into a distal vein.*
- *As the tourniquet is to be applied, xylocaine without adrenaline is used.*
- *Bupivacaine is absolutely contraindicated for Bier's block.*
- *Tourniquet cannot be released before 30 minutes of completion of procedure.*

91. High infectivity and low pathogenecity indicates,

a. Case b. Carrier
c. Virulence d. None

92. In PSVT drug of choice is,

a. Amiodarone b. Verapamil
c. Adenosine d. Lignocaine

93. Microcytic hypochromic anemia is seen in except,

a. Thallasemia major
b. Iron deficiency anemia
c. Folic acid deficiency
d. Sideroblastic anemia

- *Causes of Microcytic Hypochromic Anemia:*
- ***S**ideroblastic anemia, **I**ron Deficiency Anemia, **T**halassemia, **A**nemia of Chronic disease, **L**ead poisioning @**SITAL***

94. A 3 yr old child presented with high grade fever associated With seizure, her parents gave h/o of similar type of episodes occurred in the past, seizure subsides with subsidence of temperature what will be your first differential diagnosis?

a. GTCS
b. partial tonic clonic seizure
c. Febrile convulsion
d. Absence seizure

95. Which of the following is the most important stimulus for the secretion of bile:

a. Bile salts b. Bile acid
c. Secretin d. CCK

Cholagogues

- *Substances that causes contraction of gall bladder (CCK)*

Choleretics:

- *Substances that increases secretion of bile (bile salts are most potent)*

96. An animal that harbours the sexual stage of parasite is

a. Definitive Host b. Intermediate Host
c. Accidental Host d. Reservoir

- *Definitive Host- Harbours adult stage of parasite or in which sexual reproduction takes place.*
- *Intermediate host- Harbours the larval stage or in which asexual reproduction takes place.*

97. A child's canine has already erupted, his 3rd molar hasn't erupted yet but 2nd molar just erupted then estimate the age of this child,

a. 6-7 yrs b. 7-9 yrs
c. 9-llyrs d. 12-15yrs

Age of Eruption of Permanent Teeth:

M1	Ic	Il	PM1	PM2	C	M2	M3
6	7	8	9	10	11	12-14	17-25

@ Mama Is In Pain Can Papa Make Medicine

98. After death of a boy, on examination there was laceration of neck muscles, then what will be mode of death,

a. Hanging
b. Partial hanging
c. Strangulation
d. Autoerotic hanging

99. A patient presented with marked weight loss and dyspnea, after examination it was found that there was small cell carcinoma at upper lobe of lung which resulted in Horner's syndrome, which is incorrect about it?

a. Ipsilateral anhidrosis
b. Ptosis
c. Enophthalmous
d. Compression of parasympathetic chain

Sympathetic denervation of face :

- ***P**tosis (slight drooping of eyelid: superior tarsal muscle)*
- ***A**nhidrosis (absence of sweating) and flushing of affected side of face*
- ***M**iosis (pupil constriction)*
  ***@PAM** is Horny*

Associated with lesion of spinal cord above T1 (eg, Brown-Séquard syndrome, late-stage syringomyelia) or of the stellate ganglion alongside the spinal cord (eg, Pancoast tumor).

100. Pilocarpine is contraindicated in,

a. Malignant glaucoma
b. Absolute glaucoma

90.d Regional nerve block	91.b Carrier	92.c Adenosine
93.c Folic acid def	94.c Febrile convulsion	95.a Bile salts

c. Acute congestive glaucoma
d. Open angle glaucoma

☞ *Pilocarpine is contraindicated, because it can further narrow the anterior chamber angle and cause the ciliary muscle to spasm*

ANSWERS

81.b Foramen of Luskha and Magendie	82.b pain,touch, temp in C/l vibration in l/l	83.c CML
84.b Vit B	85.c Scurvy	86.a Sq root of variance
87.c TOF	88.b E.coli	89.c Salmonella
90.d Regional nerve block	91.b Carrier	92.c Adenosine
93.c Folic acid def	94.c Febrile convulsion	95.a Bile salts
96.a Definitive Host	97.d 12-15 yrs	98.b Partial Hanging
99.d Compression of parasympathetic chain	100.c Acute congestive glaucoma	

101. Lumbar puncture is contraindicated in,

a. Encephalitis b. Brain abscess
c. Meningitis d. GBS

☞ *CSF assessment is important in investigating infections (meningitis or encephalitis), subarachnoid haemorrhage and inflammatory conditions (multiple sclerosis, sarcoidosis and cerebral lupus).If there is a cranial space-occupying lesion causing raised intracranial pressure, LP presents a theoretical risk of downward shift of intracerebral contents, a potentially fatal process known as coning. Consequently, LP is contraindicated if there is any clinical suggestion of raised intracranial pressure (papilloedema), depressed level of consciousness, or focal neurological signs suggesting a cerebral lesion, until imaging (by CT or MRI) has excluded a space-occupying lesion or hydrocephalus.*

102. All are routine investigation during pregnancy except,

a. Hb b. TC, DC
c. VDRL d. Platelets

103. Misoprostol is,

a. PGE1 agonist
b. PGE2 agonist
c. PGF2 agonist
d. Smooth muscle relaxant

☞ *Misoprostol (PGE1) has been used for cervical ripening. Primarily it has been used for peptic ulcer disease. Transvaginal misoprostol is used for induction of labor. A dose of 50 mg every 3 hours to a maximum of six doses or 25 mg every 4 hours to a maximum of eight doses or orally 50 mg every 4 hours has been used. Misoprostol has been found to be as effective as PGE2for cervical ripening and induction of labor.*

☞ ***Risks:** Incidence of tachysystole (hyperstimulation), meconium passage are high*

104. Steroids is used in bronchial asthma and it reduces symptoms by,

a. Bronchodilation
b. Reduces inflammation
c. Increases vital capacity
d. Immunosuppression

☞ *Corticosteroids reduces bronchial mucosal inflammation. These are best inhaled to minimize systemic effects.*

105. Maximum upper limit of bilirubin level in physiological jaundice is,

a. 5 gm% b. 8 gm%
c. 10 gm% d. 15 gm%

Characteristics of physiological Jaundice:

☞ *First appears between 24-72 hours of age*
☞ *Maximum intensity seen on 4-5th day in term and 7th day in preterm neonates*
☞ *Does not exceed 15 mg/ dl*
☞ *Clinically undetectable after 14 days.*
☞ *No treatment is required but baby should be observed closely for signs of worsening jaundice.*

106. A 65 year old hypertensive and diabetic presented with sudden onset of left sided weakness, what will be investigation of choice,

a. CT scan head b. CXR PA view
c. MRI of head d. PET

107. A 7 yrs old male child presented with h/o of cough and fever for 10 days and O/e trachea is shifted to same side and percussion note is woody dull on right side, what will be your auscultatory finding in that area?

a. Inspiratory and expiratory phase equal
b. Inspiratory phase longer
c. Expiratory phase longer without gap
d. Expiratory phase longer with definite gap between two phases sound.

☞ *Diagnosis made from history and examination is suggestive of Pneumonia(Consolidation), And on auscultation we can hear Bronchial breath*
☞ *Sound. Inspiratory is equals to expiratory and there is gap.*

108. Which is true about Japanese encephalitis vaccine used in Nepal?

a. Live attenuated
b. It came from Korea

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101.b.Brain abscess	102.b.TC, DC	103.a. PGE1 agonist
104.b.Reduces inflammation	105.d.15 gm%	106.a.CT head
107.d. Expiratory phase longer with definite ...	108.a. Live attenuated	109.c.Stylomastoid foramen

c. Given along with DPT
d. None

109. Facial nerve exits through,
a. Foramen magnum
b. Jugular foramen
c. Stylomastoid foramen
d. Foramen spinosum

Course and relations of facial nerve:
- *Divided by stylomastoid foramen into intracranial and extra cranial part.*
- *Intracranial part.*
- *Extracranial part.*

Intracranial part.
- *Passes from internal acoustic meatus along with vestibulo-cochlear nerve.*
- *Passes in the bony facial canal above the vestibule of the internal ear.*
- *Forms genu by bending backwards, (genicular Ganglion present) and reaches medial to auditus of mastoid antrum.*
- *Passes vertically downward along the posterior wall of tympanic cavity.*

Extracranial part.
- *Lies superficial to styloid process.*
- *Pierces the postero medial aspect of the parotid gland.*
- *Runs superficial to retromandibular vein and external carotid artery.*

110. Tumor marker of carcinoma of breast is,
a. CEA
b. CA125
c. α-AFP
d. β - hcG

CEA (Carcino-embryonic antigen)
- *Complex glycoprotein that is associated with the plasma membrane of tumor cells, from which it may be released in to the blood.*
- *Mainly used for colorectal cancer but may be elevated in:*
  Smokers
  Some benign conditions – IBD, pancreatitis, cirrhosis, COPD etc
  Other malignant lesions – ovarian, breast, pulmonary.
- *Normal <2.5 ng/ml, Borderline 2.5-5.0 ng/ml, Elevated >5 ng/ml.*
- *Upper limit of normal level in smokers considered to be 5 ng/ml.*

111. Staphylococcus aureus is differed from Staphylococcus epidermidis because
a. it is catalase positive
b. It is coagulase positive
c. it is urease positive
d. it is commensal

STAPHYLOCOCCUS AUREUS:
- *Catalase positive.*
- *Coagulase positive*
- *Beta hemolytic.*
- *Ferments mannitol*

Disease:
- *Infective endocarditis (acute)*
- *Abscesses*
- *Toxic shock syndrome*
- *Gastroenteritis*
- *Suppurative lesions,*
- *pyoderma, impetigo*
- *Osteomyelitis*

112. "Invertogram' is investigation of choice in,
a. imperforate anus
b. Hirschprung's disease
c. hiatus hernia
d. intussusceptions

- *Wangenstein'sinvertogram: Usually done 6-12 hours after birth, so as to allow air to reach the rectal pouch. A metal coin (marker) is strapped at the presumed site of anus and X-ray is taken.*

113. A 65 year old male undergone TURP. After 2 days, he developed dizziness and vertigo and disoriented. What will be the cause for that condition,
a. hypokalemia
b. hyperkalemia
c. hyponatremia
d. hypercalcemia

Postoperative complication of TURP:
- *Water intoxication with congestive cardiac failure—TURP syndrome*
- *Hyponatraemia*
- *Haemorrhage*
- *Infection*
- *Incontinence*
- *Perforation of the bladder or prostatic capsule*
- *Stricture urethra*
- *Retrograde ejaculation and impotence*
- *Recurrence*

114. Cause of bacillary dysentery is'
a. salmonella
b. vibrio cholera
c. shigella
d. E. coli

115. A 23 year old male presented with generalized itching marked on the webs of hand, he also complained of some nodules in the scrotum. Such complains were present in his family members also, what drug will you prescribe to treat disease,

109.c.Stylomastoid foramen	110.a.CEA	111.b. It is coagulase positive
	112.a. imperforate anus	113.c. hyponatremia
	114.c.shigella	115.c.permethrine

a. terbinafine b. steroids
c. permethrine d. cetirizine

SCABIES

- ***Etiology**: Sarcoptesscabiei; spreads by prolonged and intimate contact.*
- ***Morphology**: Burrow (thin, serpentine lesion) is characteristic lesion. Papulovesicles and nodules.*
- ***Site**: Webs, wrists, ulnar aspect of forearms, breasts, scrotum, and penis. Face, soles, and palms spared in adults but characteristically involved in infants.*
- ***Treatment**: Permethrin 5%, gamma benzene hexachloride 1%, benzyl benzoate 25%; single application of the first two medications while three applications of the last. Ivermectin, single oral dose.*

ANSWERS

101.b.Brain abscess	102.b.TC, DC	103.a. PGE1 agonist
104.b.Reduces inflammation	105.d.15 gm%	106.a.CT head
107.d. Expiratory phase longer with definite ...	108.a. Live attenuated	109.c.Stylomastoid foramen
110.a.CEA	111.b. It is coagulase positive	112.a. imperforate anus
113.c. hyponatremia	114.c.shigella	115.c.permethrine

116. Blood Picture: Hb =l0gm%, Serum Ferritin 10, MCV: 70. Most likely diagnosis is:

a. Thalassemia Trait
b. Vit.B_{12} Deficiency
c. Anemia of chronic disease
d. Iron Deficiency anemia

117. In Down's syndrome, commonest cardiac defect is,

a. ASD
b. VSD
c. Endocardial cushion defect(ECD)
d. transposition of great arteries

Cardiac anomaly in Down's syndrome:

- *ECD>VSD>PDA*

118. Folic acid during pregnancy is given in,

a. 1st trimester b 2nd trimester
c. 3rd trimester d. after delivery

119. Most common lung infection in acquired immunodeficiency

A. Toxoplasma b. Pneumocystis
c. Tuberculosis d. Cryptococcus

120. True about active management of Third Stage of Labour except

a. IV Oxytocin given,
b. IM Oxytocin, uterine massage is given
c. IM Methrgin 0.2mg is given
d. Active cord traction

121. Blood from placenta to fetus is carried by

a. Umbilical artery b. Umbilical vein
c. Vitelline vein d. Vitelline artery

122. Best way to prevent hypotension during spinal anesthesia

a. Preloading with crystalloids
b. Mephentermine
c. Dopamine
d. Tredelenberg's position

123. The degree to which a test is capable of measuring what it is intended to measure is referred to as:

a. Reliability b. Validity
c. Sensitivity d. Specificity

124. A child with hypokalemia, hyponatremia, hypochloremia and metabolic alkalosis. Most probable diagnosis is

a. Pyloric stenosis
b. Celiac disease
c. Duodenal atresia
d. Chronic pancreatitis

125. Bronchiolitis is caused by

a. H.influenza b. S. pneumoniae
c. Staph aureus d. RSV

126. α- Fetoprotein is increased in all the following except

a. Increased maternal weight
b. Multiple gestations
c. Maternal hepatoma
d. Abdominal wall defect

α- Fetoprotein

- *Used for Hepatocellular carcinoma and non-seminomatous testicular tumour.*
- *Synthesized by hepatocytes and endodermally derived gastrointestinal tisssues*
- *Elevated in benign conditions like cirrhosis, acute and chronic hepatitis, 2nd and 3rd semester of pregnancy, IBD etc.*
- *Other malignant conditions show elevation and include pancreatic, gastric, colorectal or lung cancer.*
- *Upper limit of normal value in non-pregnant adult is <25ng/ml.*
- *No detectable level in upto 20% of HCC cases.*

116.d.IDA	117.c.ECD	118.a. 1st trimester
119.b. Pneumocystis	120.b. IM Oxytocin, uterine massage...	121.b.Umbilical vein
122.a.Preloading with crystalloids	123.b. Validity	124.a. Pyloric stenosis
125.d.RSV	126.a. Increased maternal weight	127.d.Impaired liver function

- *Level correlates with tumour burden, staging and hence prognosis.*

127. In a young female of reproductive age, an absolute contraindication for prescribing oral contraceptive pill is:

a. Diabetes
b. Hypertension
c. Obesity
d. Impaired liver function

Absolute contraindication of OCPs:

1. ***Circulatory diseases (Past or present)***
   - *Arterial or venous thrombosis*
   - *severe hypertension*
   - *history of stroke*
   - *heart disease: valvular, Ischemic*
   - *diabetes with vascular complications*
   - *Migraine with focal neurologic symptoms*
2. ***Diseases of the liver***
   - *Active liver disease*
   - *Liver adenoma, carcinoma*
3. ***Others***
   - *pregnancy*
   - *Breastfeeding (postpartum 6 weeks)*
   - *Major surgery or prolonged immobilization*
   - *estrogen dependent neoplasms, e.g. breast cancer*

128. Drug of choice in Delirium tremens is

a. Diazepam b. Phenytoin
c. Chlordiazepoxide d. Morphine

129. The following are true in papilledema except

a. Blurring of the disk
b. Congestion of retinal veins
c. White exudates around the disk
d. Sudden loss of vision

Clinical features of papilledema:

- *Transient obscuration of vision.(No decrease in vision.)*
- *Normal color vision.*
- *Normal pupillary reaction*
- *Visual field → enlargement of blind spot (Usually normal)*
- *Associated symptoms-Headache (worse in the morning), nausea, vomiting*

Ophthalmoscopic findings:

- *Swelling of optic disc (6-8D)which spills into periphery producing concentric folds in retina. (Paton's line)*
- *Hyperemia of disc*
- *Blurring of disc margen*
- *Tortuous and dilated veins*
- *Retinal hemorrhages*

130. Best investigation to look for disseminated bone metastasis

a. Bone scan b. CT
c. MRI d. X ray

ANSWERS

116.d.IDA	117.c.ECD	118.a. 1st trimester
119.b. Pneumocystis	120.b. IM Oxytocin, ♀ uterine massage...	121.b.Umbilical vein
122.a.Preloading with crystalloids	123.b. Validity	124.a. Pyloric stenosis
125.d.RSV	126.a. Increased maternal weight	127.d.Impaired liver function
128.a. Diazepam	129.d. Sudden loss of vision	130.a. Bone scan

131. A 65 year old female of known case of diabetes presented at emergency with weakness and abdominal pain. On examination, patient was dehydrated, sweet smell on breathing and decreased blood pressure,

A. What is your diagnosis?

a. hypoglycemia
b. hyperglycemia
c. diabetic ketoacidosis
d. diabetic nephropathy

Signs and symptoms of DKA

Symptoms

- *Nausea/vomiting*
- *Abdominal pain*
- *Thirst/polyuria*
- *Shortness of breath*

Signs

- *Tachycardia*
- *Dehydration/hypotension*
- *Tachypnea/kussamaul breathing*
- *abdominal tenderness*
- *lethargy/obtundation/come*

B. Which electrolyte is deranged in this condition?

a. K b. Na
c. Ca d. Mg

- *Potassium: Usually falsely elevated due to acidosis. Shifting of potassium from intracellular to extracellular compartment due to decrease INSULIN.*

C. What is the cause of fast breathing in this condition?

a. hypotension
b. metabolic acidosis

c. hypothermia
d. dehydration

☞ *Kussmauls respiration and fruity odor occur d/t metabolic acidosis.*

D. What is the fluid of choice to treat this condition?

a. dextrose
b. dextran
c. normal saline
d. normal saline and dextrose both

☞ *Fluids: Start with NS. If the patient is not in shock, sodium is normal ori, and/or potassium must be repleted concurrently, switch to 1/2 NS or D5 1/2 NS.*

E. Sodium bicarbonate is indicated when PH is less than,

a. 7.1 b. 7
c. 7.2 d. 7.3

☞ *If the patient remains acidotic with pH<7.2 and plasma bicarbonate <12mmol/leven after adequate hydration and insulin therapy, bicarbonate should be administered.*

ANSWERS				
131.A.c	B.a	C.b	D.c	E.c

132. A 42 year old male presented with painful limitation of the hip joint. He has the history of fall on the ground 8 months back and treated for fracture neck of femur,

A. What is the cause of pain in this condition?

a. Non union
b. delayed union
c. Avascular necrosis of hip joint
d. stiffness of the joint

Complication of intracapsular fracture neck of femur:

☞ *Avascular necrosis (66-84%)>Non union>Arthritis.*
☞ *MRI is the investigation of choice. Sectoral sign is seen*
☞ *Pathognomic sign: Crescent sign visible on plain X-ray.*

B. Which of the following is not risk factor for such condition?

a. alcohol
b. diabetes mellitus
c. rupture of capsule
d. medullary vessels damage

☞ *Avascular necrosis: Mc cause is idiopathic>prolonged steroid use>post traumatic> sickle cell disesase.*

C. What is the mode of treatment in this patient?

a. total hip replacement
b. hemiarthroplasty
c. leave as it was
d. internal fixation

☞ *Hemiarthroplasty is the treatment in case of avascular necrosis.*

D. If this condition is in 75 years old male then,

a. treatment modalities is same
b. treatment modalities is different
c. only conservative treatment is sufficient
d. none

☞ *Total hip replacement is the treatment in this condition . Hemi replacement will cause residual pain*
☞ *Hip spica application in this age group is unacceptable.*

E. Immediately after fracture, which nerve is damaged in such condition

a. femoral b. sciatic
c. popliteal d. ilioinguinal

ANSWERS				
132.A.c	B.b	C.b	D.b	E.b

133. A 67 years old male presented with history of slow to start walking and rapid small steps, he has the expressionless face also,

A. What is your diagnosis?

a. Wilson's disease
b. Parkinson's disease
c. athetosis
d. Alzheimer's disease

PARKINSON'S DISEASE (PD)

☞ *Bradykinesia (slow dressing, feeding, writing, walking)*
☞ *Mask like face (hypomimia)*
☞ *Rigidity (cogwheel)*
☞ *Resting Tremor (pill rolling)*
☞ *Shuffling gait (involuntary gait acceleration after initiation)*
☞ *Postural instability(Depression)*

B. Which is the best drug to treat this condition?

a. levodopa
b. acetycholine
b. carbidopa
d. levodopa with carbidopa

1. Levodopa (dopamine precursor/prodrug)

- *Early Adverse effects: nausea and Vomiting, postural hypotension, cardiacaarrhythmias, alteration in taste sensation*
- *Late Adverse effects: abnormal movements, night mares, end of dose deterioration,*
- *Pyridoxine enhances peripheral decarboxylation of levodopa less is available to cross to the brain , thus abolishes therapeutic effect of levodopa.*

2. Carbidopa and benserazide (peripheral dopamine decarboxylase inhibitor)

- *They reduce levodopa metabolism- increase its availability and make more of it available to cross to the brain hence practically always given with levodopa.*
- *Co-careldopa-combination of levodopa with carbidopa*

C. Drug used in question B has a side effect for that which drug is effective,

a. pantoprazole
b. metoclopromide
c. paracetamol
d. fexofenadine

D. All of the following clinical features are present except,

a. bradykinesia b. rigidity
c. tremor d. altered sensorium

E. In upper limbs which is most common?

a. leadpipe rigidity
b. cogwheel rigidity
c. equally present
d. none

☞ *In parkinson's disease, leadpipe rigidity common in upper limb and cogwheel is common in lower limbs.*

ANSWERS				
133.A.b	B.d	C.b	D.d	E.a

134. A 38 year old patient presented on emergency with burn of head,both upper limbs, chest, abdomen and back,

A. Calculate the bum % in this patient?

a. 63% b. 72%
c. 54% d. 48%

Walace's rule (Rule of 9)

☞ *The total BSA burned is calculated using the rule of nine (Rule of Wallace) in adults. In calculating the BSA involved 10 burns area is not taken into account (i.e., areas affected in 20 onwards) burn are added).*

Area of body	In adults	In children
Head and neck	9	18
Trunk (front)	18 (9 +9)	18 (9 + 9)
Trunk (back)	18 (9 + 9)	18 (9 + 9)
Upper limbs	18 (9 + 9)	18
Lower limbs	36	27
Genitals	1	1

☞ *Total burns % =9%(Head)+18%(both upper limbs)+18%(upper chest and abd abdomen)+18%(back)=63%*

B. If his weight is 50 kg then how much fluid will you give in 24 hours,

a. 12600ml b. 14000ml
c. 11600ml d. 10000ml

Fluid rescucitation:

☞ *Parkland formula is used to calculate replacement fluid in first 24 hours.*
☞ *Fluid is = 4 ml% of burn/kg/24 hours.*
☞ *½ of this is given in first 8 hours, rest in next 16 hours.*
Total fluid=4×63×50=12600ml

C. In case of child, how much % would you calculate,

a. 63% b. 54%
c. 72% d. 48%

In case children, burn of head cover 18% BSA, so total burns become 72%

D. Commonest cause of death after 2 days of electrical burn is,

a. hypovolemia
b. acute renal failure
c. arrhythmia
d. infection

E. Which dressings for full-thickness and contaminated wounds gives broad spectrum prophylaxis against bacterial colonization?

a. Silver sulfadiazine
b. Mafenide acetate
c. Neosporin
d. Silver nitrate

- *Silver sulfadiazine cream (1 per cent) gives broad spectrum prophylaxis against bacterial colonization and is particularly effective against Pseudomonas aeruginosa and also methicillin-resistant Staphylococcus aureus.*

ANSWERS				
134.A.a	B.a	C.c	D.b	E.a

135. A 6 year old child presented with recurrent epistaxis and petechiae all over the body, there was no organomegaly. On blood picture, hemoglobin was within normal range and, mild leucopenia but marked thrombocytopenia,

A. What is your diagnosis?

a. aplastic anemia
b. ITP
c. ALL
d. Fanconi's anemia

B. For bleeding child, best modality of treatment is,

a. immunoglobulin
b. blood transfusion
c. platelet transfusion
d. fresh frozen plasma

- *In ITP, avoid transfusing platelets unless the patient is actively bleeding, because thrombocytopenia is caused by immune mediated destruction of platelets.*

C. To start steroid therapy, which condition must be ruled out?

a. aplastic anemia
b. hemophilia A.
c. hematological malignancy
d. sickle cell disease

D. If there was pancytopenia without organomegaly, best diagnosis would be,

a. aplastic anemia
b. ITP
c. ALL
d. Fanconi anemia

Suspect aplastic anemia in an otherwise

- *healthy young adult with pancytopenia, no blasts on peripheral smear, and*
- *hypocellular bone marrow. For idiopathic aplastic anemia, consider antithymocyte globulin and cyclosporine or allogeneic bone marrow transplant.*

E. If child is not relieved after 1st line of treatment then after how many months will you call for follow up?

a. 2 months
b. 3 months
c. 4 months
d. 6 months

IMMUNE THROMBOCYTOPENIC PURPURA:

- *A disorder of reduced platelet survival, typically by immune destruction in the spleen. ITP commonly occurs in childhood with viral illnesses but may also affect young adults. Subtypes and their associated causes are as follows:*

  1°: No identifiable cause.
- *Secondary: Medications (gold, quinine, ~lactam antibiotics), CLL, SLE, HIV, HCV.*

Symptom:

- *Typically presents with petechiae, purpura, mucosal bleeding, and men-orrhagia.*
- *Spleen size is normal.*
- *Isolated thrombocytopenia in an otherwise healthy young adult is most likely ITP. ITP is a clinical diagnosis, and bone marrow examination is not required. Bone marrow aspirate and biopsy are reserved for those who do not respond to prednisone therapy or who are > 60 years of age. 2° ITP may occur in SLE, HIV, CLL., and HCV.*

Treatment:

- *Prednisolone: 1 mg/kg/day x 4-6, 60% response rate. Time to remission is 1-3 weeks.*
- *IVIG: 1 g/kg x 1 or 0.4 g/kg/dayx2. 80-90% response rate. Rapid remission, but short-lived. Used for acute bleeding risk.*

Splenectomy

- *Danazol: 600mg/day 10-80% response rate Usually second line.*
- *Anti-RhD: 80-90% response rate . Induces hemolytic anemia; works only with Rh-+ patients.*

ANSWERS				
135.A.b	B.a	C.c	D.a	E.d

136. A G_1P_0 has delivered a baby of 3 kg, after self expulsion of placenta, continued to bleed then

A. What will be your next step in management?

a. massage abdomen and explore uterus
b. packing the uterus
c. clamping of internal carotid artery
d. partial hysterectomy

B. Commonest cause of PPH is,

a. traumatic
b. atonic uterus
c. equally traumatic and atonicity
d. none

Cause of PPH(@4T)

- ***T**one (Atony of uterus)*
- ***T**rauma (Cervical tear, Extended vaginal tear)*
- ***T**issue (Retaine placenta)*
- ***T**hrombin (coagulopathy)*

C. Which drug is best in 3rd stage of labour?

a. oxytocin b. ergometrine
c. $MgSO_4$ d. misoprostol

Active Management of third stage of labour(@TOCM)

- *At first, palpate the abdomen to rule outtwins.*
- *Inj. Oxytocin 10 units I/M*
- *Controlled cord traction of placenta*
- *Uterine massage*

D. Last option of treatment in PPH is?

a. clamping of arteries b. B-lynch suture
c. total hysterectomy d. hysterotomy

Surgical management of uterine atony:

1. *Conservative : compression sutures are used to prevent PPH (B - Lynch most commonly used, Chao's multiple sqaure sutures)*
2. *Sequential devascularizationof uterus*
3. *Hysterectomy is indicated if all other measures fail/life threatening situation/no future pregnancy plan.*

E. All the reproductive organs come to its normal anatomical position by days.

a. 32 b. 42
c. 40 d. 36

Involution of uterus to pre-pregnant state takes 6 wks (i.e. uterus become a pelvic organ).

- *Immediately after delivery : uterus is 1000-1200 gms.*
- *2weeks: Pelvic organ.*
- *6 weeks: 60 gm (pre-pregnant state).*

Immediately after delivery size of the uterus is ~20 wks (just below umbilicus) and it becomes intrapelvic organ by 2wk.

ANSWERS				
136.A.a	B.b	C.a	D.c	E.b

137. A 52 year old male, known case of hypertension presented In emergency with sudden onset of chest pain which radiated jaws and arms sweating and decreased blood pressure,

A. What will be your 1st investigation of choice to confirm diagnosis?

a. cardiac enzymes b. ECG
c. total blood count d. chest X- ray

ECG is the initial investigation of choice in case of Acute MI which shows:

- *Within minutes: The T wave may become peaked(Earliest feature)*
- *Within 2-3 hrs: ST segment may begin to rise (Pardees sign)*
- *Within 8-12 hrs: T wave inverts*
- *Within 24-48 hrs: Pathological Q wave begin to form, waves usually persist in old MI*

B. Which is the most reliable enzyme marker?

a. LDH b. troponin T & I
c. CK-MB d. AST

- *Cardiac specific Troponin T or I are normally not detectable in the blood of healthy individuals but may increase after STEMI to levels >20 times higher than the upper level. So they are the preferred biochemical markers for MI.*

C. Commonest cause of death in this condition is,

a. atrial fibrillation
b. ventricular fibrillation
c. ventricular ectopics
d. LVF

Common Arrhythmias in MI

- *Ventricular fibrillation*
- *Ventricular tachycardia*
- *Accelerated idioventricular rhythm*
- *Ventricular ectopics*
- *Atria fibrillation*
- *Atrial tachycardia*
- *Sinus bradycardia (particularly after inferior MI)*
- *Atrioventricular block*

Ventricular fibrillation: This occurs in 5–10% of patients who reach hospital and is thought to be the major cause of death in those who die before receiving medical attention.

D. Not the contraindication of thrombolysis,

a. active peptic ulcer
b. recent surgery within 1 month
c. pregnancy
d. hypotension

Contraindication of thrombolysis:

- *Active internal bleeding*
- *Previous subarachnoid or intracerebral haemorrhage*
- *Uncontrolled hypertension*
- *Recent surgery (within 1 mth)*
- *Recent trauma (including traumatic resuscitation)*
- *High probability of active peptic ulcer*
- *Pregnancy*

E. If patient came after 2 weeks of attack of MI then what will be the ECG finding?

A. ST elevation
b. tall T wave
c. pathological Q wave
d. absence of R wave

ANSWERS				
137.A.b	B.b	C.b	D.d	E.c

138. A 55 year old male known case of peptic ulcer for 15 years presented in emergency with non-billous vomiting. The patient looks unhealthy, and dehydrated,

A. What is your diagnosis

a. Ulcer changed into carcinoma
b. acid peptic disease
c. Gastric outlet obstruction
d. Intestinal obstruction

B. Due to excessive vomiting, patient may go into state,

a. hyperchloremic alkalosis
b. hypochloremic alkalosis
c. hypochloremic acidosis
d. hyperchloremic acidosis

CONSEQUENCES OF GASTRIC OUTLET OBSTRUCTION

- *Anatomical effect: because of obstruction there is hyperperistalsis of the stomach leading to hypertrophy of the musculature of the stomach and later on there is huge dilatation of the stomach*
- *Metabolic effect: because of vomiting there is chronic dehydration, prerenal azotemia and there is loss of H+, Cl– and K+ ion leading to hypochloremic, hypokalemic metabolic alkalosis.*
- *In early stage: Loss of H+ and Cl– ion leading to hypochloremic alkalosis. Sodium may be normal and hypokalemia may not be obvious.*
- *At late stage of metabolic alkalosis, the kidney passes acidic urine due to passage of H+ ion in urine in exchange of sodium ion. This is called paradoxical aciduria as on the background of metabolic alkalosis kidney should have excreted alkaline urine.*

C. The state which explained in question B is treated with,

a. isotonic saline and sodium
b. hypertonic saline and potassium
c. isotonic saline and potassium
d. hypertonic saline and sodium

D. Best method to feed the patient before surgery,

a. gastrosotomy
b. jejunosotomy
c. gastroduodenosotomy
d. gastrojejunosotomy

Jejunostomy for enteral nutrition is becoming more popular because of:

- *Its comfort,*
- *Easy to do,*
- *Can be kept for long time,*
- *Lesser complication than gastrostomy.*

Types

- *Witzeljejunostomy: Site of placing jejunostomy is 30 cm from duodenojejunal junction.*
- *Needle jejunostomy using catheter of small gauge.*

E. Commonest cause of above disorder is,

a. gastric carcinoma
b. long standing peptic ulcer
c. congenital pyloric stenosis
d. none

ANSWERS				
138.A.c	B.b	C.a	D.b	E.a

139. A 45 year old female of G8P5 presented with something coming out through vagina for 1 year, and her such complaints have been in increasing intensity,

A. least common complications you should look for in this, condition,

a. infection of the bladder
b. peritonitis

c. incarceration
d. carcinomatous changes

- ***Incarceration:*** *At times, infection of the paravaginal and cervical tissues makes the entire prolapsed mass edematous and congested. As a result, the mass may be irreducible.*
- ***Peritonitis:*** *Rarely, the peritoneal infection (pelvic peritonitis) may occur through the posterior vaginal wall.*
- ***Carcinoma:*** *Carcinoma rarely develops on decubitus ulcer.*

B. Which is not the indication of pessary treatment?

a. Early pregnancy
b. puerperium
c. Completed family
d. waiting for surgery

Indications of use of pessary are:

- *Early pregnancy— Thepessary should be placed inside up to 18 weeks when the uterus becomes sufficiently enlarged to sit on the brim of the pelvis.*
- *Puerperium— to facilitate involution.*
- *Patients absolutely unfit for surgery especially with short life expectancy.*
- *Patient's unwillingness for operation.*
- *While waiting for operation.*

C. What will be the best modality of treatment in this case?

a. Anterior colporraphy
b. vaginal hysterectomy with PFR
c. paravaginal repair
d. sacral colpopexy

D. O/E it was found that external is protrudes outside the vaginal introitus but the uterine body still remains inside the vagina, then what will be the grading of prolapsed?

a. 1st degree
b. 2nd degree
c. procidentia
d. complex prolapsed

DEGREE OF UTERINE PROLAPSE:

- *FIRST DEGREE— The uterus descends down from its normal anatomical position (external os at the level of ischial spines) but the external os still remains inside the vagina.*
- *SECOND DEGREE— The external os protrudes outside the vaginal introitus but the uterine body still remains inside the vagina*
- *THIRD DEGREE(Syn: Procidentia, Complete prolapse) — The uterine cervix and body descends to lie outside the introitus.*
- *Procidentia involves prolapse of the uterus with eversion of the entire vagina.*

E. Support of uterus is all of the following except?

a. uterosacral ligaments
b. angle of uterus with vagina
c. retroverted uterus
d. pericervical ring

SUPPORT OF UTERUS

Primary support

- *Muscular or active support*
- *Pelvic diaphragm (levatorani), perineal body, urogenital diaphragm (deep transverse perinei).*
- *Fibromuscular or Mechanical supports.*
- *Uterine axis, pubocervical, transverse cervical ligament, uterosacral ligament, round ligament of uterus.*

Secondary (false) supports

- *Broad ligament*
- *Uterovesical fold of peritoneum, rectovaginal folds of peritoneum.*

ANSWERS				
139.A.d	B.c	C.b	D.b	E.c

140. A 32 year old male presented with complaints of respiratory distress for 3 days, fever for 2 months and pain in right chest for 2 months. On examination hyper-resonant note was found on right side of the chest,

A. What is your diagnosis?

a. Pleural effusion
b. Pneumothorax
c. Hydropneumothorax
d. Empymathorasis

B. On your palpation, what will be the position of trachea in this condition?

a. Left side deviated
b. Right side deviated
c. Centrally placed
d. None

C. Which subtype is regarded as medical emergency?

a. Open
b. Closed
c. Valvular
d. b & c both

D. What will be the probable cause for this condition,

a. Rupture of subpleural bleb
b. Tuberculosis

c. Pulmonary infarction
d. Bronchogenic carcinoma

E. Normal intrapleural pressure is,

a. -3 to -8 mm of Hg
b. -2.5 to -6 mm of Hg
c. -3.5 to -7.5 mm of Hg
d. -3 to -7 mm of Hg

Intrapleural Pressure (IPP)

- *Represents the pressure inside the thin film of fluid between the visceral pleura, which is attached to the lung, and the parietal pleura, which is attached to the chest wall.*
- *The outward recoil of the chest and inward recoil of the lung create a negative (subatmospheric) IPP.*
- *lIPP is the outside pressure for all structures inside the chest wall.*

PNEUMOTHORAX:

- *Collection of air in pleural space*
- *Primary spontaneous pneumothorax: 2° to rupture of subpleural apical blebs (In tall, thin young males).*
- *Secondary pneumothorax: 2° to COPD, trauma, infections (TB, Pnewnocystisjiroveci), and iatrogenic factors (thoracentesis, subclavian line placement, positive-pressure mechanical ventilation, bronchoscopy).*
- *Tension pneumothorax: A pulmonary or chest wall defect acts as one wayvalve causing air trapping in the pleural space. It is a medical emergency.*
- *Clinical feature:*
- *Acute onset of unilateral pleuritic chest pain and dyspnea*
- *Examination reveals tachypnea, diminished or absent breath sounds, hyperresonance, decrease tactile fremitus, and JVD 2° to compressionof the SVC.*
- *Tension pneumothorax also presents with tracheal deviation and hemodynamic instability.*

Investigation:

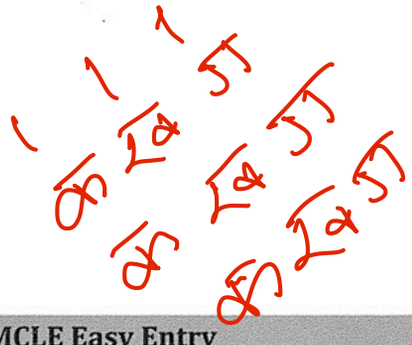
- *CXR: radiolucent area without bronchovascular marking and retraction from the chest wall (best seen in endexpiratory films)*

Treatment:

- *Tension pneumothorax requires immediate needle decompression (second intercostal space at the midclavicular line) followed by chest tubeplacement.*

ANSWERS

140.A.b	B.a	C.c	D.b	E.b



NMCLE - CHAITRA 2071

1. **Flight of ideas associated with**
   a. Depression b. Anxiety
   c. Mania d. Schizophrenia

   Mania features: DIGFAST
   - ***D**istractibility and easy frustration*
   - ***I**rresponsibility and erratic uninhibited behaviour*
   - ***G**randiosity*
   - ***F**light of ideas*
   - ***A**ctivity increased with weight loss and increased libido*
   - ***S**leep is decreased*
   - ***T**alkativenes*

2. **Dose of Anti-D immunoglobulin to be given to Rh negative women after delivery is:**
   a. 100µg b. 300µg
   c. 200µg d. 400µg

   - *Anti-D immungoglobulin is administered i.m. to the mother 300µg following delivery.*

3. **Misoprostol is**
   a. PGE_1 b. PGE_2
   c. $PGF_{2\alpha}$ d. PGE_3

   - *PGE_1 : misoprostol*
   - *PGE_2: Dinoprostone*
   - *PGE_2: Carboprost*

4. **What is the chromosomal abnormality present in klinefelter's syndrome**
   a. Trisomy 21 b. 47 XXY
   c. Trisomy 18 d. 45 XO

5. **Moro's reflex disappears by**
   a. 7 wks b. 12wks
   c. 5wks d. 6 months

6. **Absorption of vitamin B_{12} takes place in**
   a. Duodenum b. Stomach
   c. Jejunum d. Ileum

7. **"Human Development Index" HDI comprises all of the following except:**
   a. Longevity
   b. Income
   c. Knowledge
   d. Infant mortality rate (IMR)

   - *The Human Development Index (HDI) is a composite statistic of life expectancy, education, and per capita income indicators*

8. **In which level of interventions immunization falls?**
   a. Primordial prevention
   b. Specific protection
   c. Disability limitation
   d. Early diagnosis

9. **In a Epidemic, the first case that comes to the notice of an investigator is .**
   a. Primary case b. Index case
   c. secondary case d. Control

   - *The term primary case can only apply to infectious diseases that spread from human to human, and refers to the person who first brings a disease into a group of people—a school class, community, or country.*
   - *The index case, however, is the patient in an outbreak who is first noticed by the health authorities, and who makes them aware that an outbreak might be emerging*

10. **Mantoux test is read after**
    a. 24 hours b. 72 hours
    c. 48 hours d. 98 hours

11. **Workers of dye industry are prone to**
    a. Carcinoma liver
    b. Carcinoma urinary bladder
    c. Carcinoma lung
    d. Carcinoma kidney

12. **Endemic goiter most commonly present with**
    a. Solitary nodules b. Hyperthyroid
    c. diffuse goiter d. Hypothyroid

13. **Benign prostatic hyperplasia BPH arises from**
    a. Anterior zone b. Transitional zone
    c. Central zone d. Peripheral zone

    - *BPH arises from submucosal glands of periurethral transitional zone whereas prostatic carcinoma occurs in peripheral zone.*

14. **Most common site of urethral rupture is**
    a. Prostatic b. Penile
    c. Bulbar d. membranous

15. **Most radiosensitive tumor**
    a. seminoma b. Teratoma
    c. Sertoli celltumour d. Choriocarcinoma

    Most radiosensitive:
    - *testicular tumor is seminoma* ←
    - *ovariantumour is dysgerminoma* ←

1.c. Mania	2.b. 300 microgram	3.a.PGE1
4.b.47XXY	5.d. 6 months	6.d. Ileum
7.d. IMR	8.b.Specific protection	9.b.Index case
10.b.72 hours	11.b.Ca urinary bladder	12.c.Diffuse goiter
13.b.Transitional zone	14.d.Membranous	15.a.Seminoma

- *lung tumor is small cell carcinoma of lung*
- *bonetumours are multiple myeloma and Ewings sarcoma*
- *brain tumor medulloblastoma*
- *renal tumor wilms tumor*

ANSWERS		
1.c. Mania	2.b. 300 microgram	3.a.PGE1
4.b.47XXY	5.d. 6 months	6.d. Ileum
7.d. IMR	8.b.Specific protection	9.b.Index case
10.b.72 hours	11.b.Ca urinary bladder	12.c.Diffuse goiter
13.b.Transitional zone	14.d.Membranous	15.a.Seminoma

16. Fetal anomaly scan should be done in
a. 18 - 22 wks b. 8 wks
c. 10 wks c. 32wks

17. OCP may decrease the risk of
a. Carcinoma breast
b. Carcinoma cervix
c. Fibroid
d. Ovarian cancer

OCP decreases the risk of:
- *Endometrial cancer*
- *Epithelial ovarian cancer*
- *Colorectal cancer*

18. Rickets is due to deficiency of :
a. vitamin A b. vitamin D
c. Vitamin B d. vitamin C

19. Erb's palsy is due to involvement of which of the following part of brachial plexus
a. Lower trunk
b. Upper trunk
c. Long thoracic nerve
d. Middle trunk

20. Menieres' disease is characterized by
a. vertigo, tinnitus and hearing loss
b. Tinititus, hearing loss and headache
c. Vertigo, ear discharge, tinnitus and headache
d. Conductive hearing loss and tinnitus

Cardinal symptoms of Meniere's diseases:
- *Episodic vertigo*
- *fluctuating hearing loss*
- *tinnitus*
- *sense of fullness in the involved ear*

21. Dendritic ulcer is seen in
a. Fungal keratitis
b. Chlamydial keratitis
c. Herpes zoster keratitis
d. herpes simplex keratitis

22. Chalazion occurs due to inflammation of :
a. Meibomian gland b. Lacrimal gland
c. Zeis gland c. Muller's gland

- ***Chalazion** is a chronic non-infective granulomatous inflammation of the meibomian gland.*
- ***Internal hordeolum** is a suppurative inflammation of the meibomian gland associated with blockage of the duct.*
- ***External hordeolum** is an acute suppurative inflammation of lash follicle and its associated glands of Zeis and Moll.*

23. Highly Radio sensitive tumour is -
a. Ewing's sarcoma
b. Osteosarcoma
c. Chondroblastoma
d. All of the above

24. Scurvy is due to deficiency of:
a. Vitamin C b. Vitamin A
c. Vitamin D d. Vitamin B comlex

25. Beriberi due deficiency
a. Thiamine b. Niacin
c. Folic acid d. Pyridoxine

26. Mostly injured in fractures of shaft of humerus
a. Ulnar nerve
b. Musculocutaneous nerve
c. Radial nerve
d. Axillary nerve

27. Chest compression during CPR depth is
a. 2 inches b. 4cm
c. 5cm d. 4 inches

28. Burking is a method of:
a. Suicidal injury
b. Accidental injury
c. Drowning related injury
d. Homicidal injury and traumatic asphyxia

29. Acrodermatitis enteropathica is due to deficiency of?
a. Copper b. Zinc
c. Calcium d. Molybdenum

30. Molluscum contagiosum is caused by
a. Virus b. Bacteria
c. Fungi d. Rickettsia

- *Molluscum contagiosum is caused by a DNA poxvirus called the molluscum contagiosum virus (MCV)*

16.a 19.b 22.a 25.a 28.d
17.d 20.a 23.a 26.c 29.b
18.b 21.d 24.a 27.a 30.a

31.b.Lichen planus	32.c.Strep pneumonia	33.a.Enteric fever
37.b. K^+	38.d.Measuring serum progesterone..	39.a.PCT

ANSWERS		
16.a. 18-22 weeks	17.d.Ovarian cancer	18.b. Vitamin D
19.b.Upper trunk	20.a.Vertigo, tinnitus and hearing loss	21.d.herpes simplex keratitis
22.a.Meibomian gland	23.a.Ewing's sarcoma	24.a.Vitamin C
25.a.Thiamine	26.c.Radial nerve	27.a. 2 inches
28.d.Homicidal injury and trauma...	29.b.Zinc	30.a. Virus

31. Dyskeratosis of dermaoepidermal junction and saw tooth appearance of rete-ridges is seen in:
a. Dermatomyositis b. Lichen planus
c. Vitiligo d. Pityriasis versicolor

32. Acute pyogenic meningitis in older adults is most commonly caused by:
a. Listeria monocytogens
b. Neisseria meningitis
c. Streptococcus pneumonia
d. Haemophilus influenza

Common causes of bacterial meningitis vary by age group:
- ***Newborns:*** *Group B Streptococcus, Streptococcus pneumoniae, Listeria monocytogenes, Escherichia coli*
- ***Babies and children:*** *Streptococcus pneumoniae, Neisseria meningitidis, Haemophilusin fluenzae type b (Hib), group B Streptococcus*
- ***Teens and young adults:*** *Neisseria meningitidis, Streptococcus pneumoniae*
- ***Older adults:*** *Streptococcus pneumoniae, Neisseria meningitidis, Haemophilus influenzae type b (Hib), group B Streptococcus, Listeria monocytogenes*

33. Leukopenia is caused by:
a. Enteric fever b. Viral infection
c. New born d. Starvation

34. Which of the following is least likely site for metastasis?
a. Vertebrae
b. Proximal end of femur
c. Small bones of hands and feet
d. Pelvis

35. Normal plasma osmolarity (mOsm/kg) is
a. 150-180 b. 230-260
c. 270-300 d. 330-360

36. Maintenance of corpus luteum is through:
a. LH
b. Estrogen
c. Progesterone
d. Chorionic gonadotropin

- *If the egg is fertilized and implantation occurs, the syncytiotrophoblast (derived from trophoblast) cells of the blastocyst secrete the hormone human chorionic gonadotropin (hCG, or a similar hormone in other species) by day 9 post-fertilization.*
- *Human chorionic gonadotropin signals the corpus luteum to continue progesterone secretion*

37. The abundant intracellular ion in our body is:
a. Na^+ b. K^+
c. Mg^+ d. Ca^+

38. All are true about ovulation except:
a. Endometrial histology
b. Study of cervical mucous
c. Rise in basal body temperature in 2nd half of the cycle
d. Measuring serum progesterone onday 14th of cycle

39. Water is maximally absorbed in:
a. PCT b. DCT
c. Collecting duct d. Loop of henle

40. D cell of pancreas secrete:
a. Gastrin b. Somatostatin
c. Glucagon d. Insulin

- *Alpha cells that produce glucagon, and make up 15–20% of total islet cells. Glucagon is a hormone that raises blood glucose levels by stimulating the liver to convert its glycogen into glucose.*
- *Beta cells that produce insulin and amylin, and make up 65–80% of the total islet cells. Insulin lowers blood glucose levels by stimulating cells to take up glucose out of the blood stream. Amylin slows gastric emptying, preventing spikes in blood glucose levels.*
- *Delta cells that produce somatostatin, and make up 3–10% of the total islet cells. Somatostatin is a hormone that suppresses the release of the other hormones made in the pancreas.*
- *Gamma cells that produce pancreatic polypeptide, and make up 3–5% of the total islet cells. Pancreatic polypeptide regulates both the endocrine and exocrine pancreatic secretions.*
- *Epsilon cells that produce ghrelin, and make up less than 1% of the total islet cells. Ghrelin is a protein that stimulates hunger.*

41. Coronary blood flow is:
a. Regulated by sympathetic vasodilatation
b. Greatest during early systole
c. Stable throughout cycle
d. More during diastole than systole

31.b.Lichen planus	32.c.Strep pneumonia	33.a.Enteric fever
34.c.Small bones of hands and feet	35.c.270-300	36.d. Chorionic gonadotropin

37.b. K^+	38.d.Measuring serum progesterone..	39.a.PCT
40.b.Somatostatin	41.d.More during diastole ...	42.b.Liver

33. Viral + Enteric

42. During 2nd trimester of pregnancy erythropoiesis occurs primarily in:
a. Spleen b. Liver
c. Lymph nodes d. Red bone marrow

43. Muscle used for quiet breathing :
a. Internal intercostals& rectus abdominis
b. External intercostals& rectus abdominis
c. Diaphragm and external intercostals
d. Diaphragm only

44. Posterior pituitary secretion is:
a. Cortisol b. Prolactin
c. Oxytocin d. GH

Posterior pituitary hormones:
- *Vasopressin and Oxytocin*

Anterior pituitary hormones:
- *ACTH, FSH, LH, TSH, Growth hormone and prolactin*

45. When the environmental temperature is 106 degree f/ 41 degree celcius & relative humidity is less than 10% , mechanism causes heat loss from normal person is:
a. Evaporation b. Radiation
c. Conduction d. Convection

ANSWERS		
31.b.Lichen planus	32.c.Strep pneumonia	33.a.Enteric fever
34.c.Small bones of hands and feet	35.c.270-300	36.d. Chorionic gonadotropin
37.b. K+	38.d.Measuring serum progesterone..	39.a.PCT
40.b.Somatostatin	41.d.More during diastole ...	42.b.Liver
43.d.Diaphragm only	44.c.Oxytocin	45.b.Radiation

46. Abductor of vocal cord is:
a. Posterior cricoarytenoid
b. Cricoarytenoid
c. Transverse cricoarytenoid
d. Lateral cricoarytenoid

47 Vestibular function is tested by:
a. Impedence audiometry
b. Acoustic reflex
c. Galvanic stimulation
d. Fistula test

Assessment of vestibular functions
Clinical tests:
- *Spontaneous Nystagmus*
- *Fistual test*
- *Romberg test*
- *HallpikeManoenvre test*

Lab tests:
- *Caloric tests*
- *Electronystagmography*
- *Optokinetic test*
- *Posturography*

48. Causes of nasal obstruction in atrophic rhinitis is:
a. Polyp b. Crusting
c. Secretions d. DNS

- *Atrophic rhinitis is a chronic inflammation of nose characterized by atrophy of nasal mucosa and turbinate bones. The nasal cavities are roomy and full of foul-smelling crusts*
- *There is foul smell from nose though patient himself is unaware of the smell due to marked anosmia (merciful anosmia).*

49. A 13 yr old child presents with 3 yrs h/o epistaxis, gradual swelling of maxilla with medial displacement of turbinates with mild proptosis, diagnosis is:
a. Fibrous dysplasia
b. Ca. maxilla
c. Olfactory neuroblastoma
d. Angiofibroma

50. A 35 yr old man found unconscious with b/l constricted pupils, bradycardia, excessive sweating and secretion, most likely diagnosis is:
a. Organophosphorus poisoning
b. Opium poisoning
c. Dhatura poisoning
d. Cyanide poisoning

51. Gastric lavage is contraindicated in poisoning of:
a. Barium carbonate
b. Sedative drugs
c. Organophosphorus
d. Corrosive acids

Gastic lavage is contraindicated in:
- *Corrosive poisoning*
- *Hydrocarbon poisoning*
- *Aluminium phosphide poisoning*

52. Drug of choice in dermatitis herpetiformis is:
a. Dapsone b. PCM
c. Isoniazid d. Acetaminophen

- *Dermatitis herpetiformis is a chronic blistering skin condition characterized by blisters filled with a watery fluid. Despite its name , DH is neither related to nor caused by herpes.*
- *Dapsone is an effective treatment*

PART-19

46.a.Posterior cricoarytenoid	47.d.Fistula test	48.b.Crusting
49.d.Angiofibroma	50.a. OP poisoning	51.d. Corrosive acids

53. In primary syphilis primary treatment used is:
a. Azithromycin 2 gm single dose
b. Doxycyclin 100 mg twice (2 weeks)
c. Injection benzathine penicillin 2.4 MU IM single dose
d. Azithromycin 5gm single dose

54. DOC in general tonic clonic seizure is
a. Phenobarbitone b. Sodium valporate
c. Ethosuximide d. Carbamazepine

55. Effective single dose therapy in Trachoma is:
a. Erythromycin b. Azithromycin
c. Doxicycline d. Atropine

56. Pulmonary fibrosis is caused by:
a. Busulfan b. Methotrexate
c. Atenolol d. Betaxolol

Drug causing pulmonary fibrosis: BBCMAN
- *B-Bleomycin*
- *B-Busulfan*
- *C-Cyclophosphamide*
- *M-Methylsergide*
- *A-Amiodarone*
- *N-Nitrofurantoin*

57. Beta adrenoreceptor blocking agent that should be contraindicated in the renal failure patient is:
a. Esmolol b. Metoprolol
c. Propranolol d. Atenolol

- *Beta blockers contraindicated in renal failure patient (mnemonic: **ANS**)*
- *Atenolol*
- *Nadolol*
- *Sotalol*

58. Causes of menorrhagia are all except :
a. Adnomyosis
b. Fibroid
c. Pelvic endometriosis
d. Dermoid cyst of ovary

59. Dose of anti-D immunoglobulin to be given to non immune Rh D negative woman after delivery is:
a. 100 mcg b. 200mcg
c. 300mcg d. 400mcg

60. Antenatal mother with epilepsy on phenytoin must be given:
a. Vit A supplementation
b. Vit B6 supplementation
c. Vit B12 supplementation
d. Folic acid supplementation

ANSWERS

46.a.Posterior cricoarytenoid	47.d.Fistula test	48.b.Crusting
49.d.Angiofibroma	50.a. OP poisoning	51.d. Corrosive acids
52.a.Dapsone	53.c.Inj.benzathine penicillin	54.b. Sodium valproate
55.b.Azithromycin	56.a.Busulfan	57.d.Atenolol
58.d.Dermoid cyst of ovary	59.c.300 mcg	60.d.Folic acid

61. Lowest effective dose of mifepristone for medical treatment of pregnancy is:
a. 50mg b. 100mg
c. 150mg d. 200 mg

62. External cephalic version is contraindicated in:
a. Age<35 yrs b. Scarred uterus
c. Flexed breech d. Multigravida

63. Anti hypertensive drug contra indicated in pregnancy:
a. Labetolol b. Methyldopa
c. ACE inhibitor d. Nifedipine

- *ACE inhibitor use in the first trimester is also associated with a risk of major congenital malformations, particularly affecting the cardiovascular and central nervous systems.*

64. Cervical cancer is most commonly caused by:
a. HPV 6 & 12 b. HPV 16 & 18
c. HPV 31& 32 d. HPV 35& 45

65. Not a good prognostic factor in bipolar disorder is:
a. Typical feature
b. Good response to treatment
c. Severe depression
d. Gradual onset

66. In pathogenesis of parkinson's disease which play an important role:
a. GABA b. Dopamine
c. Epinephrine d. Acetylcholine

67. Which of the following is not true about mania:
a. Restlessnes
b. Heighted concentration
c. Impairerd judgement
d. Increased energy

68. Casal's necklace is seen in deficiency of
a. Vit B1 b. Vit B2
c. Vit B3 d. Vit B12

61.d.200mg	62.b.Scarred uterus	63.c.ACE inhibitor
64.b.HPV 16 and 18	65.d.Gradual onset	66.b.Dopamine
67.b.Heighted concenteration	68.c. Vit B3	69.a.HRCT

The Casal collar or Casal necklace is a clinical sign in which there is an erythematous pigmented skin rash in the distribution of a broad collar (dermatomes C3 and C4). It is seen in patients with pellagra

69. Interstitial lung is diagnosed by:
a. HRCT
b. PFT
c. Bronchoscopic biopsy
d. Increased energy

70. Rib notching is seen in:
a. TB
b. Sarcoidosis
c. Osteomalacia
d. Coarctation of aorta

71. In a39 week pregnant female with small gynecoid pelvis the fetal head is found high up. She has no placenta previa, no uterine fibroid and no other associated pathologies. What is the most probable diagnosis?
a. CPD Cephalopelvic disproportion
b. Breech presentation
c. Transverse lie
d. Polyhydraminos

72. After doing ARM for induction of labour, What should be ruled out first?
a. Cord prolapsed
b. Bleeding P/V
c. Number of contraction per 10 minutes
d. Active fetal movements

73. What other structure forms renal angle with 12th rib?
a. Lattisimus dorsi
b. Paravertebral fascia
c. Pre vertebral fascia
d. Erector spinae muscle

Renal angle is formed between inferior border of 12th rib and erector spinae muscles

74. After how many hours is Mantoux test read?
a. 24 b. 72
c. 48 d. 12

75. Which of the following is most common cause of cushing's syndrome?
a. Steroid use
b. Adrenal adenoma
c. Adrenal hyperplasia
d. Pituitary tumor

ANSWERS

61.d.200mg	62.b.Scarred uterus	63.c.ACE inhibitor
64.b.HPV 16 and 18	65.d.Gradual onset	66.b.Dopamine
67.b.Heighted concenteration	68.c. Vit B3	69.a.HRCT
70.d.Coarctation of aorta	71.a. CPD	72.a.Cord prolapse
73.d.Erector spinae	74.b.72	75.a.Steroid use

76. Which of the following maintains the shape of RBC?
a. Globin b. Spectrin
c. Fibrin d. Heme

77. Which of the following is most common organism to cause meningitis in a 9 month old child?
a. S. aureus b. H. influenza
c. S. pneumonia d. Meningococci

78. Which anti-tubercular drug can cause hyperuricemia?
a. Pyrazinamide b. Streptomycin
c. Rifampicin d. Ethambutol

79. Treatment modality of choice in thyrotoxicosis in pregnant woman is:
a. Propylthiouracil b. Methimazole
c. Surgery d. Radioiodine

80. Which muscle helps in unlocking the knee?
a. Popliteus b. Adductor Magnus
c. Biceps femoris d. Sartorius

81. The Ca++ channel blocker with predominantly peripheral action is:
a. Verapamil b. Dilitazem
c. Nifedipine d. Depranil

Dihydropyridine CCBs eg. Nifedipine have predominantly peripheral vasodilatory action whereas non dihydropyridine CCBs have significant SA and AV node depressant effects with lesser amount of peripheral vasodilatation.

82. Sequence of colour change in Raynaud's disease is:
a. Red, blue, white b. White, blue, red
c. Blue, red, white d. White, red, blue

83. Following urethral rupture, immediate procedure to be done is:
a. Urethral catheterization
b. Suprapubic cystotomy
c. Referral to urologist
d. Observation

84. Staghorn calculus is made up of
a. Oxalates b. Phosphates
c. Uric acid d. Cysteine

76.b.Spectrin	77.b.H.influenza	78.a.Pyrazinamide
79.a.Propylthiouracil	80.a.Popliteus	81.c.Nifedipine
82.b.White, blue, red	83.b.Suprapubic cystotomy	84.b.Phosphates

91.b. Minocycline	92.b.Trachoma	93.d.IVth CN
94.a.Iliacus and psoas major	95.d. Post auricular node	96.b.150 ml

85 **Beck's triad of cardiac tamponade includes all except:**
a. Hypotension
b. Raised JVP
c. Muffled heart sounds
d. Tachycardia

86. **Local anaesthetic with vasoconstrictor is contraindicated in:**
a. Finger block
b. Spinal block
c. Epidural block
d. Regional anaesthesia

87. **Spinal anaesthesia is given at which of the following levels:**
a. L1-L2 b. L3-L4
c. Midline of thorax d. Below L3(caudal)

88. **Wound healing is not impaired by:**
a. Hypoproteinemia
b. Jaundice
c. Deficiency of vitamin B complex
d. Foreign body

89. **Transplantation of a kidney from mother to son is an example of:**
a. Autograft b. Allograft
c. Isograft d. None

90. **A young lady presents with white lacey lesions in oral cavity and her proximal nail folds have extended on to the nail bed. What is the likely diagnosis?**
a. Psoriasis
b. Geographical tongue
c. Lichen planus
d. Candidiasis

ANSWERS

76.b.Spectrin	77.b.H.influenza	78.a.Pyrazinamide
79.a.Propylthiouracil	80.a.Popliteus	81.c.Nifedipine
82.b.White, blue, red	83.b.Suprapubic cystotomy	84.b.Phosphates
85.d. Tachycardia	86.a.Finger block	87.b.L3-L4
88.c.Deficiency of vit B complex	89.b.allograft	90.c.Lichen planus

91. **A 17 yrs old girl with acne has been taking a drug for the last two yrs she now presents with blue black pigmentation of nails. The likely medication causing the above pigmentation is:**
a. Tetracycline b. Minocycline
c. Doxycycline d. Azithromycin

92 **Herbert's pit is seen in:**
a. Veneral conjunctivitis
b. Chlamydia trachomytis
c. Gonococcal conjunctivitis
d. Atopic conjunctivitis

93. **Superior oblique muscle is supplied by:**
a. IIIrd CN b. Vth CN
c. VIth CN d. IVth CN

94. **Which muscle is major flexor of Hip joint?**
a. Psoas major and iliacus
b. Vastusmedialis
c. Tensor fascia lata
d. Gluteus maximus

95. **Which is not constituent of Waldeyer's ring?**
a. Palatine tonsil
b. Pharyngeal tonsil
c. Lingual tonsil
d. Post auricular node

96. **What is the normal volume of CSF?**
a. 100 ml b. 150 ml
c. 200 ml d. 250 ml

97. **Argyll Robertson pupil is seen in:**
a. CNS syphilis b. Leprosy
c. Multiple sclerosis d. Myasthenia gravis

98. **Phenytoin causes following side effects except:**
a. Gum hypertrophy b. Hirsutism
c. Hyperglycemia d. Hypercalcemia

99. **The first muscle to be affected in tetanus is:**
a. Abdominal muscle
b. Jaw muscles
c. Back muscles
d. Diaphragm

100 **The mechanism of action of toxin in Cholera is:**
a. Increased cAMP
b. Invasion of gut wall
c. Necrosis of gut wall
d. Inhibition of digestion

101 **Captopril causes cough by:**
a. Inhibition of bradykinin metabolism
b. Histamine release
c. Local irritation in the throat
d. Stimulation of cough center

102 **Which of the following is both alpha and beta antagonist?**
a. Labetolol b. Sotalol
c. Atenolol d. Propranolol

97.a.CNS syphilis	98.d. Hypercalcemia	99.b.Jaw muscles
100.a. Increased cAMP	101.a.Inhibition of bradykinin ...	102.a.Labetalol

103. NSAID induced peptic ulcer is treated with:
a. Ranitidine b. Omeprazole
c. Famotidine d. Sucralfate

104. Change to first order to zero order pharmacokinetics occurs in
a. Phenytoin b. Cyclosporine
c. Progesterone d. Carbamazepine

105. Increased anion gap is not seen in:
a. Salicylate poisoning
b. Renal tubular necrosis
c. Lactic acidosis
d. Ethylene glycol poisoning

ANSWERS		
91.b. Minocycline	92.b.Trachoma	93.d.IVth CN
94.a.Iliacus and psoas major	95.d. Post auricular node	96.b.150 ml
97.a.CNS syphilis	98.d. Hypercalcemia	99.b.Jaw muscles
100.a. Increased cAMP	101.a.Inhibition of bradykinin ...	102.a.Labetalol
103.b.Omeprazole	104.a.Phenytoin	105.b.Renal Tubular Acidosis

106. Cataract in diabetes mellitus Is due to accumulation of.....in lens?
a. Glucosa b. Sorbitol
c. Copper d. Zinc

107. Infectious mononucleosis is caused by:
a. EB virus b. Hepatitis virus
c. HSV d. CMV

108. If P indicates prevalence. I indicates incidence & D: duration of illness, then the relationship between them is:
a. P=I*D
b. I=P*D
c. P=I/D
d. None of the above

109. Odd's ratio is derived from:
a. Case control study
b. Cohort study
c. Cross sectional study
d. Randomized trail

110. Diagnostic power of a test is reflected by:
a. Sensitivity
b. Specificity
c. Predictive value
d. Population attributable risk

111. Acute breathlessness is an important feature of:
a. Pericarditis
b. CCF
c. Pneumonia
d. Pulmonary embolism

112. Recommended site of administration of vaccine in infants is:
a. Gluteal region
b. Deltoid region
c. Forearm
d. Thigh lateral aspect

113. The enterotoxin of vibrio cholerae acts on:
a. cAMP b. cGMP
c. ATP d. Ribosite

114. Exo-erythrocytic phase is absent in:
a. P. vivax b. P. falciparum
c. P. ovale d. P. malariae

115. The best time for collecting blood sample to detect microfilaria is:
a. 8pm-10pm b. 10pm-2am
c. 2am-6am d. 8am-10am

116. Earliest clinical sign of Vit A deficiency is:
a. Conjunctival xerosis
b. Night blindness
c. Bitot's spot
d. Keratomalacia

117. The presence of following microorganism is confirmatory of fecal contamination of recent origin :
a. E. coli
b. Klebsiell
c. Faecal streptococci
d. Clostridium perfringes

118. Acute flaccid paralysis is reported in which age group?
a. 0-15 yrs b. 0-5 yrs
c. 15-25 yrs d. >15 yrs

119. The relation between smoking & COPD can be tested by:
a. Z test
b. Pearsons correlation test
c. Chi square test
d. Spearman's test

120. Most common site for endometriosis is:
a. Ovary b. Peritoneum
c. Appendix d. Urinary bladder

107.a 110.c 114.b 117.c 106.b
108.a 111.d 115.b 118.a
109.a 112.d 116.a 119.c or b?
113.a 120.a

ANSWERS		
106.b.Sorbitol	107.a.EBV	108.a. P=I*D
109.a.Case control study	110.c.Predictive value	111.d.Pulmonary embolism
112.d.Thigh lateral aspect	113.a.cAMP	114.b.P. falciparum
115.b.10 pm-2 am	116.a.Conjuntival xerosis	117.c. Faecal streptococci
118.a.0-15 yrs	119.b.Pearsons correlation test	120.a.Ovary

121. Common site for CSF rhinorrhea is:

a. Ethmoidal sinus b. Frontal sinus
c. Petrous d. Cribiform plate

122. Hyperacusis is seen in all of the following except:

a. Exposure of loud sounds
b. Otosclerosis
c. Meniere's disease
d. Severe head injury

123. Exclamation mark hairs seen in

a. Cicatricial alopecia
b. Alopecia areta
c. Syphilitic alopecia
d. Alopecia totalis

124. Gonorrhea does not involve:

a. Anterior urethra b. Testes
c. Epididymis d. Prostate

125. Drug therapy in t/t of HCV is

a. Adefovir b. Interferon
c. Lamivudin d. Ganacyclovir

126. Which of the following is true regarding treatment of acute attack of Rheumatic heart disease?

a. Single dose of benzyl penicillin 1.2 million Unit IM
b. Oral phenoxymethyl penicillin 250 mg 6 hrly for 10 days
c. Erythromycin 250 mg 6 hrly for 10 days
d. Any of the above

127. Maximum safe dose of lignocaine with adrenaline is:

a. 3 mg/kg b. 7 mg/kg
c. 5 mg/kg d. 1 mg/kg

128. Best method to prevent hypotension during spinal anesthesia is:

a. Tredelenberg's position
b. IV dopamine
c. IV Mephenteramine
d. Preloading with fluids

129. A known case of diabetic comes to you with blood sugar report. His random blood sugar shows 300 mg/dl. What Ix would you do to assess his long term blood sugar control?

a. Fasting blood sugar
b. Post-prandial blood sugar
c. Glycosylated hemoglobin
d. Both a & b

130. Opening of Posterior ethmoidal air sinuses in:

a. Inferior meatus b. Middle meatus
c. Superior meatus d. Any of the above

131. Berkesonian bias is a type of :

a. Investigator's bias b. Suject bias
c. Selection bias d. Analyzer bias

132. Koplik's spot are seen in:

a. Typhoid b. Measles
c. Leprosy d. Chicken pox

133. Orthotoludine test helps to determine:

a. Phosphates in water
b. Nitrates in water
c. Fluorine in water
d. Combined and free chlorine in water

134. The route of transmission of polio is

a. Faecal oral route
b. Droplet infection
c. Both of above
d. None of the above

135. Low birth weight means birth weight below:

a. 2.5 kg b. 2 kg
c. 1.5 kg d. 1 kg

- *Low birth weight<2.5 kg*
- *Vey low birth weight 1-1.5 kg*
- *Extremely low birth weight<1 kg*

ANSWERS		
121.d.Cribiform plate	122.b.Otosclerosis	123.b.Alopecia areata
124.b.Testes	125.b.Interferon	126.d Any of above
127.b.7 mg/kg	128.d. Preloading with fluids	129.c.Glycosylated hemoglobin
130.c.Superior meatus	131.c.Selection bias	132.b.Measles
133.d.Combined and free Cl in water	134.c. Both of above	135.a.2.5 kg

136. What is the limiting amino acid in pulses?
a. Threonine b. Methionine
c. Tryptophan d. Cysteine

137. An agent with low pathogenicity and high infectivity give rise to more:
a. Carriers b. Clinical cases
c. Vectors d. Epidemic

138. The trophozoite of E. histolytica most commonly causes ulceration into
a. Ileum
b. Ascending colon and cecum
c. Rectum
d. Sigmoid colon

139. 100 gm of cow milk contains:
a. 65 kcal b. 72 kcal
c. 67 kca d. 117kcal

140. What is true about methods of transmission of brucellosis?
a. Contact with infected tissues and body products
b. Infected food borne infection
c. Air borne infection
d. All of the above

141. First clinical sign of vitamin A deficiency is:
a. Xerophthalmia
b. Conjunctivalxerosis
c. Night blindness
d. Colour blindness

142. When group of muscles remain contracted even after death as they were is state of contraction immediately prior to death, this condition is called
a. Cadaveric spasm
b. Rigor mortis
c. Post mortem lividity
d. Stiffening

143. Perforation of stomach is commonest in poisoning due to
a. Sulphuric acid
b. Hydrochloric acid
c. Nitric acid
d. Aluminium hydroxide

144. Voyeurism is:
a. Act of observing an unsuspecting person naked, disorbing or engaged in sexual activity for obtaining sexual pleasure
b. Sexual intercourse with animals
c. Sexual intercourse with children
d. Act of exposure of private organs to unsuspecting stranger

145. Rigor mortis starts from
a. Heart b. Eyelids
c. Facial muscles d. Finger and toes

Rigor mortis first appears in involuntary muscles. It appears in the heart within an hour after death. In the voluntary muscles. It starts from eyelids.

146. The colour of contusion at 8th day will be
a. Red b. Yellow
c. Blue d. Green

147. Milk synthesis is caused by:
a. Aldosterone b. Prolactin
c. Estrogen d. Oxytocin

148. Meig's syndrome is most commonly seen with
a. Fibroma of ovary b. Teratoma
c. Endometriosis d. Adenomyosis

Meigs syndrome is the triad of ascites, pleural effusion, and benign ovarian tumor (fibroma, fibrothecoma, Brenner tumour, and occasionally granulosa cell tumour)

149. Not use of misoprostol:
a. Peptic ulcer disease
b. Induction of labor
c. Induction of abortion
d. As atocolytic

150. Which is known as dangerous placenta previa
a. Type I b. Type II
c. Type III d. Type IV

ANSWERS

136.b.Methionine	137.a.Carriers	138.b.Ascending colon and rectum
139.c. 67 Kcal	140.d.All of above	141.b.Conjunctival xerosis
142.a.Cadaveric spasm	143.a.Sulphuric acid	144.a.Act of observing an...
145.a.Heart	146.b.Yellow	147.b.Prolactin
148.a.Fibroma of ovary	149.d.As a tocolytic	150.b.Type IIb

151. Not seen in diphtheria:
a. Polyneuropathy
b. Endotoxemia
c. Cardiomyopathy
d. Pseudomembrane formation

C. diptheriae produces exotoxin which can cause myocarditis, polyneuritis and other systemic toxic effects.

152. Rodent ulcer is
a. Sq. cell ca b. Basal cell Ca
c. Syphilitic ulcer d. Ulcer due to burns

153. Acute mastitis in puerperium should be managed with all except
a. Breast support and plenty of fluids
b. Analgesics and antibiotics

151.b.Endotoxemia	152.b.Basal cell carcinoma	153.d.do not feed

c. Continue breast feeding
d. Do not feed

154. Pancreatitis with best prognosis:
a. Alcoholic pancreatitis
b. Gall stone pancreatitits
c. Post op. pancreatitis
d. Idiopathic pancreatitis

155. Commonest complication of pseudocyst of pancreas is:
a. Sarcomatous change
b. Infection
c. Rupture
d. Hemorrhage

156. Curling's ulcer are seen in:
a. Burn patients
b. Head injury
c. Zollinger-ellison syndrome
d. Drug abusers

157. Bile is concentrated in gall bladder by:
a. 25 times b. 10 times
c. 20 times d. 30 times

158. A patient on neurological assessment opens eyes to pain, speaks to pain, speaks inappropriate words and withdraws to pain. What will be his GCS?
a. 7 b. 8
c. 9 d. 10

- *Eye opening-2*
- *Verbal – 3*
- *Motor - 4*

159. Organism causing Gas gangrene
a. Clostridium perfringes
b. C. septicum
c. C. oedematiens
d. All of the above

Gas gangrene is caused by exotoxin-producing Clostridium species (most often C. perfringens, and C. novyi, but less commonly C. septicum[6] or C. ramnosum),

160. A 1 month old child presents with projectile vomiting and visible peristalsis in upper abdomen likely diagnosis is:
a. Duodenal atresia
b. Annular pancreas
c. Hypertrophic pyloric stenosis
d. Malrotation of GUT

161. The percentage of lignocaine in spinal anesthesia is:
a. 2 b. 4
c. 5 d. 0.5

162. Presence of collateral circulation of hand is demonstrated by:
a. Collateral's test b. Sellick's test
c. Allen's test d. Katy's test

163. Drug not used in CPR is:
a. Lignocaine b. Ketamine
c. Adrenaline d. Atropine

164. Anaesthetic of choice in Asthmatics is:
a. Halothane b. Thiopentone
c. Ketamine d. Fentanyl

165. Beri Beri disease is due to deficiency of
a. Vitamin K b. Vitamin B
c. Vitamin E d. Vitamin D

ANSWERS

151.b.Endotoxemia	152.b.Basal cell carcinoma	153.d.do not feed
154.b. Gall stone pancreatitis	155.b.Infection	156.a.Burn patients
157.b.10 times	158.c.9	159.d.All of the above
160.c.Hypertrophic pyloric stenosis	161.c.5	162.c.Allen's test
163.b.Ketamine	164.c.Ketamine	165.b. Vitamin B

166. Mee's line in the nails are seen in -------- poisoning
a. Lead b. Arsenic
c. Mercury d. Nicotine

Mees' lines or Aldrich–Mees' lines, also called leukonychiastriata, are white lines of discoloration across the nails of the fingers and toes (leukonychia) Mees' lines appear after an episode of poisoning with arsenic, thallium or other heavy metals,

167. In stable angina
a. CK-MB is elevated
b. Troponin-I is elevated
c. Myoglobin is elevated
d. Cardiac marker levels remain unchanged

168. What is the nerve supply of stapedius?
a. 5th b. 7th
c. 6th d. 9th

169. Recurrent jerky, semipermeable movements of a part of body is called:
a. Athetosis b. Chorea
c. Hemiballismus d. Tics

166.b.Arsenic poisoning	167.d.Cardiac marker levels remain unchanged	168.b.7th
169.b.Chorea	170.a.Cotrimoxazole	171.d.All of the above

170. The drug of choice in pneumocystis carinii pneumonia is:
a. Cotimoxazole b. Cefoperazone
c. Penicillin d. Cefotaxime

171. Conditions required for mummification to occur are:
a. High atmospheric temperature
b. Dry air condition
c. Wind
d. All of the above

172. Palmar erythema is seen in
a. Repiratory failure b. ARF
c. CHF d. Hepatic failure

173. Canon 'a' waves are seen in
a. Atrial flutter
b. Atrial fibrillation
c. Complete heart block
d. Cardiac tamponade

☞ *Cannon A waves occur when the right atrium contracts against a closed tricuspid valve and can be seen in atrioventricular nodal reentrant tachycardia, complete heart block, and ventricular tachycardia*

174. ATT used in patients of renal failure is:
a. Pyrazinamide b. Isoniazid
c. Rifampicin d. Ethambutol

☞ *Rifampicin can be used in patients of renal failure*

175. Not a clinical feature of Henoch – schonlein purpura
a. Thrombocytopenia
b. Increased serum IgA
c. Glomerulonephritis
d. Arthralgia

Criteria for HSP
☞ *Palpable purpura in the presence of at least 1 of the following 4 features:*
☞ *Diffuse abdominal pain*
☞ *Any biopsy showing predominant IgA deposition*
☞ *Arthritis or arthralgia*
☞ *Renal involvement*

176. Single drug used in prophylaxis of tuberculosis is:
a. Pyrizinamide b. Isoniazid
c. Rifampicin d. Ethambutol

☞ *Isoniazid is used in chemoprophylaxis of tuberculosis*

177. Characterstics of Wilson's disease
a. K-F ring in the cornea
b. Ceruloplasmin deficiency
c. Neuropsychiatric symptoms
d. All of the above

178. In pyogenic meningitis, the CSF finding is:
a. Increased chloride and increase glucose
b. Increased protein and increased glucose
c. Less glucose and more protein
d. CSF contains no organism

179. Major criteria for AIDS does not include:
a. Weight loss>10% b. Persistent diarrhea
c. Persistent cough d. Persistent fever

3 major clinical criteria of AIDS
☞ *weight loss> 10% and/or abnormally slow growth,*
☞ *chronic diarrhea lasting more than 1 month, and*
☞ *fever lasting more than 1 month)*

180. In Torsades de pointes, the ECG finding is:
a. Short QT interval
b. Short QRS interval
c. Prolonged QT interval
d. Prolonged QRS interval

ANSWERS

166.b.Arsenic poisoning	167.d.Cardiac marker levels remain unchanged	168.b.7th
169.b.Chorea	170.a.Cotrimoxazole	171.d.All of the above
172.d.Hepatic failure	173.c.Complete heart block	174.c.Rifampicin
175.a.Thrombocytopenia	176.b.Isoniazid	177.d. All of the above
178.c.Less glucose and more protein	179.c.Persistent cough	180.c.Prolonged QT interval

NMCLE - MANGSIR 2072

Anatomy

1. Hyoid bone is derived from ..... brachial arch.

a. 2nd b. 3rd
c. 2nd and 3rd d. 4th

- *Hyoid bone develops from two different brachial arches*
- *Lesser horn and upper body of hyoid from second arch.*
- *Greater horn and lower body of hyoid from third arch.*

2. The normal mitral valve diameter is

a. 4-5 cm^2 b. 3-5 cm^2
c. 4-6 cm^2 d. 3-4 cm^2

- *Normal area of mitral valve is (4 – 6) cm^2. Mitral stenosis occurs if valve area is < 2 cm^2.*

Physiology

3. A patient has BP of 110/80 mm of Hg.What will be the mean arterial pressure?

a. 100mm of Hg b. 90 mm of Hg
c. 88mm of Hg d. 87 mm of Hg

- *Mean arterial pressure is the average of the arterial pressures measured in each milliseconds over a period of time. It is not equal to the average of systolic and diastolic pressures because arterial pressure remains nearer to the diastolic pressure during the greater part of the cardiac cycle. It is determined 60% by diastolic and 40% by systolic pressure. It is calculated as below:*

  MAP = Diastolic pressure + 1/3rd of pulse pressure

Biochemistry

4. Orthotolidine test determines

a. Free chlorine
b. Combined chlorine
c. Both a & b
d. Free fluorine

- *Orthotolidine test uses analytic grade of orthotolidine mixed with 10 % solution of HCl.*
- *The reagent reacts with free chlorine instantly but more slowly with the combined chlorine.*
- *Thus, reading within 10 seconds after the addition of reagent determines free chlorine and that after a lapse of time eg. 15 mins determines both free and combined chlorine.*

5. Which of the following is anti-infection vitamin?

a. Vitamin B6 b. Vitamin B12
c. Vitamin C d. Vitamin A

- *Vitamin A helps in epithelialization, thus forms barrier for microbes.*
- *Deficiency of vitamin A also leads to vulnerability to infections, especially measles.*

Microbiology

6. Which of the following is not true about filariasis?

a. Man is intermediate host
b. Adult worms are found in lymphatics of man
c. Culex is vector
d. Life span of microfilaria is not exactly known

- *Humans are definite host for Wuchereriabancrofti and Brugiamalayi, the causative agents of lymphatic filariasis.*
- *Intermediate host is mosquito. Culex for wuchereria and mansonia for Brugia are the main vectors for the two filarial nematodes.*
- *The infective form for man is third stage larva.*
- *The adults localize in lymphatics of man.*
- *Humans are the reservoir of infection as the embryo of filarial worm (microfilaria) are found in peripheral blood.*

7. RH incompatibility is a type ..... hypersensitivityreaction.

a. I b. III
c. IV d. II

Note: *Go through the review notes on hypersensitivity of Microbiology*

Pathology

8. Insulin resistance is due to

a. IgG b. IgM
c. IgA d. IgD

Insulin resistance are of two types.

- ***Type A:*** *Severe hyperinsulinemia, obesity and hyperandrogenism. Occurs due to obscure defects in insulin signaling pathways*
- ***Type B:*** *Severe hyperinsulinemia, hyperandrogenism and autoimmune diseases. Occurs due to auto antibodies directed to insulin receptors.*

1.c.	2nd and 3rd	2.c.	4-6cm^2	3.b.	90 mm of Hg
4.c.	Both a & b	5.d.	Vitamin A	6.a.	Man is intermediate host
7.d.	II	8.a.	IgG	9.b.	Sickel cell anemia

9. Gandy gamma bodies are seen in

a. Hereditary Spherocytosis
b. Sickel cell anemia
c. Rabies
d. Typhoid

10. Mac Callum's plaques are seen in

a. Alzheimer's disease
b. Rheumatic endocarditis
c. Neuro blastoma
d. Multiple myeloma

☞ *Mac Callum's plaque are pathognomic of infective endocarditis and commonly found in left atrium endocardium.*

11. Flea beaten kidney is seen in

a. Benign hypertension
b. Malignant hypertension
c. Moderate hypertension
d. Pregnancy induced hypertension

Pharmacology

12. Which of the following drug inhibits 50s peptidyl transferase?

a. Aminoglycoside b. Macrolide
c. Clindamycin d. Chloramphenicol

☞ *Protein synthesisinhibitors: Specifically target smaller bacterial ribosome(70S, made of 30S and 50S subunits), leavinghuman ribosome (80S) unaffected (@ buy AT at 30 and CCEL at 50).*

30S inhibitors

1. *Aminoglycosides (they interfere with formation of initiation complex; once inside the bacterial cell wall, streptomycin binds to 30Sribosomes but other aminoglycosides bind to additional sites on 50S subunit, as well as 30S-50S interface causes misreading of code leading to incorporation of wrong amino acidand hence freeze initiation of protein synthesis.)*
2. *Tetracycline (it interferes with amino acid incorporation by blocking the attachment of aminoacyl tRNA to acceptor site.*

50S inhibitors

1. *Chloramphenicol (itinterferes at formation of peptide bond by inhibiting the activity of peptidyl-transferase.)*
2. *Macrolides and Clindamycin(both the macrolide and clindamycin interfere with translocation and inhibit the translocation of peptidyl-tRNA from acceptor to donor site.)*
3. *Linezolid (it also acts by interfering with the formation of initiation complex.*

☞ *Antibacterial property of all of the above protein synthesis inhibitors are bacteriostatic except aminoglycosides which is bactericidal and that of linezolid is variable.*

13. Disulfiram acts by inhibiting

a. alcohol dehydrogenase
b. acetaldehyde dehydrogenase
c. both
d. none

☞ *Disulfiram is a potent inhibitor of enzyme acetaldehyde dehydrogenase involved in metabolism of alcohol. It raises the concentration of acetaldehyde in body that produces various distressing symptoms.*

14. Which of the following drugs is not effective against Mycoplasma?

a. Azithromycin b. Doxycycline
c. Amoxycillin d. Levofloxacin

15. Acarbose is a

a. Sulfonylureas
b. Thiazolidine
c. Alpha-glucosidase inhibitor
d. Meglitinide

☞ *Alpha glucoside is the final enzyme in the digestion of carbohydrates in the brush border of small intestines. Acarbose slows down and decreases the digestion and absorption of polysaccharides and sucrose. Thus, postprandial glycemia is reduced without increasing the insulin levels.*

Advantages:

- *Do not cause hypoglycemia*
- *Reduces HbA1C level on long term use*
- *Reduces cardiovascular events*

Disadvantages:

- *Flatulence*
- *Abdominal discomfort*
- *Loose stools*

ANSWERS

1.c. 2nd and 3rd	2.c. 4-6cm²	3.b. 90 mm of Hg
4.c. Both a & b	5.d. Vitamin A	6.a. Man is intermediate host
7.d. II	8.a. IgG	9.b. Sickel cell anemia
10.b. Rheumatic endocarditis	11.b. Malignant hypertension	12.d. Chloramphenicol
13.b. acetaldehyde dehydrogenase	14.c. Amoxycillin	15.c. Alpha-glucosidase ..

16. **Drug of choice for pseudomembranous colitis is**
a. Metronidazole b. Vancomycin
c. Tetracycline d. Ceftriaxone

☞ *Pseudomembranous colitis occurs due to Clostridium difficle and is generally associated with antibiotics use. It is a type of superinfection.*

☞ *Metronidazole is the drug of choice, If metronidazole fails, vancomycin is used.*

17. **Calcium channel blockers are.....Anti-arrhythmic.**
a. Class I b. Class II
c. Class III d. Class IV

18. **Most common side effect of Zidovudine is**
a. Granulocytopenia and anemia
b. Granulocytosis
c. Alopecia
d. Jaundice

☞ *Zidovudine is the proto type NRTI that blocks the enzyme reverse transcriptase in virus. Toxicity are due to partial inhibition of cellular DNA polymerase.*

19. **Commonest side effect of morphine is**
a. Constipation b. Hypotension
c. Sedation d. Urinary retention

☞ *Constipation is the prominent side effect of morphine and it does not develop tolerance. It occurs due to both local and central mechanisms.*

PSM

20. **The ability of a test to detect a disease when it is present is given by**
a. specifity
b. sensitivity
c. positive predictive value
d. negative predictive value

☞ ***Sensitivity**: Ability of test to detect true positive*

☞ ***Specificity**: Ability of test to detect true negative*

21. **Convicting an innocent man is**
a. Type I b. Type II
c. Random error d. Hypothetical

***Note:** Go through the review notes on p-value and errors in Community medicine section.*

22. **Vision 90 by 2020 includes all except**
a. 90% institutional delivery
b. 90 %access to ORS and zinc
c. 90%access to antibiotics
d. 90% provision for Cotrimoxazole

23. **Which of the following is not transmitted by mosquito?**
a. Malaria b. Kalazar
c. Dengue
d. Japanese encephalitis

☞ *Kala-azar (Leishmaniasis) is transmitted by Sand Fly.*

24. **Matching removes**
a. Confounding bias b. Selection bias
c. Berkesonian bias d. All

☞ *Matching ensures cases and control are similar in regards to certain selected variables which may influence the outcome of diseases and coula confound the results. Confounding factor is one which is distributed unequally among the cases and controls. Matching is done basically to eliminate this bias.*

25. **Human development index constitutes all except**
a. Life expectancy at birth
b. CDP/Percapita in US dollars
c. Adult literacy rate and mean year of schooling
d. Life expectancy at 1 year.

26. **Exclusive breast feeding should be done for**
a. 5 months b. 6months
c. 7months d. 8months

27. **Dengue is transmitted by**
a. Aedes b. Sand fly
c. Mansonia d. Culex

28. **WHO defines blindness as vision less than**
a. 1/60 b. 3/60
c. 6/60 d. 3/36

29. **Dependency ratio is**
a. Rate b. Ratio
c. Proportion d. Any

30. **Leprosy is a public health problem if prevalence is greater than 1 in**
a. 100 b. 1000
c. 10000 d. 100000

ANSWERS

16.a. Metronidazole	17.d. Class IV	18.a. Granulocytopenia ..
19.a. Constipation	10.b. sensitivity	21.a. Type I
22.d. 90% provision ...	23.b. Kalazar	24.a. Confounding bias
25.d. Life expectancy at 1 year.	26.b. 6months	27.a. Aedes
28.b. 3/60	29.c. Proportion	30.c. 10000

31. **Time between disease initiation and detection is**
a. Communicable period
b. Serial interval
c. Latent period
d. None

- ***Incubation Period:*** *Time interval between entry of organism in body and appearance of symptoms.*
- ***Latent Period:*** *Time interval between initiation of disease and it's detection. Long latent period poses burden to clinicians as diseases is diagnosed at late stages. Eg. Cancer, Hypertension etc.*

32. **The incubation period of pertussis is**
a. 7-14 days b. 7-10 days
c. 10-14 days d. 14-21 days

33. **Which of the following vaccine is given subcutaneously?**
a. Measles b. JE
c. Yellow fever d. all

34. **Randomization removes .... Bias.**
a. Confounding bias b. Selection bias
c. Memory bias d. All of the above

Confounding:
- *Any factor associated with both exposure and outcome and has an independent effect in causation of outcome is a confounder.*
- *Methods used to control confounding are randomization (most ideal method), restriction, matching, stratification and statistical modeling.*
- *Randomization is superior to both matching and blinding as it removes selection bias (mainly), known confounding and unknown confounding as well.*
- *Randomization does not remove memory bias.*

Forensic medicine

35. **Most common pattern of finger print is:**
a. Whorls b. Composite
c. Loop d. All are equal

36. **Visible veins due to decomposition of blood after death is called**
a. Marbing b. Linea alba
c. Putrefaction d. None

- *Marbling is greenish black discoloration of the surface blood vessels. It is due to reaction of hemoglobin and hydrogen sulphide after the hemolysis of blood.*

37. **Russel's Viper venom is**
a. Myotoxic b. Hematotoxic
c. Neurotoxic d. Cardiotoxic

38. **Nepal Medical Council Act was formulated on**
a. 2052 b. 2021
c. 2025 d. 2020

39. **Which of the following is not a component of medical ethics?**
a. Autonomy b. Beneficence
c. Non-maleficence d. Maleficence

40. **Fine froth in mouth and nose and dilated pupil is seen in**
a. Drowning b. Strangulation
c. Smothering d. all

41. **All are type of laceration except**
a. Split b. Stretch
c. Tear d. Graze

Medicine

42. **High output cardiac failure is due to vitamin ..... deficiency**
a. B1 b. B12
c. C d. D

43. **What is the most common symptom of Lung Carcinoma**
a. Hemoptysis b. Cough
c. difficulty breathing d. Cyanosis

44. **Drug of choice for ventricular tachycardia produced by bupivacaine is treated with**
a. Phenytoin b. Amiodarone
c. Lignocaine d. Bertylium

45. **In which of the following increased anion gap metabolic acidosis is seen?**
a. Diarrhoea
b. Renal tubular necrosis
c. Hypoalbuminemia
d. diabetic ketoacidosis

ANSWERS

31.c. Latent period	32.b. 317-10 days	33.d. all
34.b. Selection bias	35.c. Loop	36.a. Marbing
37.b. Hematotoxic	38.d. 2020	39.d. Maleficence
40.a. Drowning	41.d. Graze	42.a. B1
43.b. Cough	44.d. Bertylium	45.d. diabetic ketoacidosis

46. **Normal anion gap is**
a. 10 mmol/lit b. 13mmol/lit
c. 10-15mmol/lit d. 10-12 mmol/lit

47. **The incubation period of salmonella food poisoning is**
a. 12-18 hours b. 18-24 hours
c. 12- 24 hours d. 2 days

- *Staphylococcal food poisoning: (1 – 6) hours*
- *Clostridial food poisoning: (6 – 12) hours*
- *Salmonella food poisoning: (12 -24) hours*

48. Peptic ulcer is common in blood group

a. O b. A
c. B d. AB

- *Gastric cancer common in blood group A positive.*

49. Prolonged QT is seen in all except

a. Hypocalcemia b. Hypothermia
c. Hypokalemia d. Hypercalcemia

50. What is not seen in acute severe asthma

a. Hypercapnia
b. Respiratory alkalosis
c. both a & b
d. Hypocapnia

- *Life threatening features of Asthma are hyperventilation, respiratory alkalosis and hypocapnia.*

51. Most common lung carcinoma in man is

a. Squamous cell carcinoma
b. Adeno carcinoma
c. Small cell carcinoma
d. Medullary carcinoma

- *Common in smokers: small cell carcinoma*
- *Common in nonsmokers: Adenocarcinoma*
- *Common causing paraneoplastic syndromes: squamous (PTH) and small (ACTH)*

52. Ceruloplasmin is increased in

a. Hepatocellular injury
b. Wilson's disease
c. Hepatitis
d. all

Surgery

53. Hippocratic facies is seen in

a. Acute appendicitis
b. Genralized peritonitis
c. Tetanus
d. Rabies

- *If generalized peritonitis is not treated timely, circulatory failure ensues with cold, clammy extremities, sunken eyes, dry tongue, thread pulse and anxious face(Hippocratic facies).*

54. Universal tumor is the name for

a. Sebaceous cyst b. Dermoid cyst
c. Lipoma d. Hydrocele

55. Meckel's diverticulum found in hernia sac is called

a. Littere's Hernia
b. Ritcher's Hernia
c. Bachdlock's Hernia
d. None

56. Chronic pancreatitis in ERCP is seen as

a. Chain of lakes
b. ground glass appearance
c. snow storm pattern
d. Flower vase appeareance

57. Bird beak sign is seen in

a. Oesophageal carcinoma
b. Renal cell carcinoma
c. Achalasia cardia
d. Intestinal tuberculosis

58. Sequence of event in small bowel obstruction is

a. Pain, vomiting, distension, constipation
b. Vomiting, constipation, pain, distension
c. Pain, distension, vomiting, constipation
d. Pain, vomiting, constipation, distension

59. Most common thyroid carcinoma is

a. Follicular carcinoma
b. Medullary carcinoma
c. Papillary carcinoma
d. Anaplastic carcinoma

60. Hospitalization for adult burnt patient should be done if burn is more than

a. 5% b. 10%
c. 15% d. 20%

ANSWERS

46.d. 10-12 mmol/lit	47.c. 12- 24 hours	48.a. O
49.d. Hypercalcemia	50.a. Hypercapnia	51.a. Squamous cell carcinoma
52.b. Wilson's disease	53.b. Genralized peritonitis	54.c. Lipoma
55.a. Littere's Hernia	56.a. Chain of lakes	57.c. Achalasia cardia
58.a. Pain, vomiting, ...	59.c. Papillary carcinoma	60.c. 15%

61. Double bubble sign in USG is seen in

a. Duodenal atresia b. Anencephaly
c. Ileal atresia d. Hydrocephalous

62. Blood is stored at

a. 4 °C b. b. -4°C
c. 0°C d. 8°C

63. **In Hepatoma which tumor marker is increased?**
a. AFP b. ACE
c. CEA d. All

64. **Bleeding on initiation of micturation is seen in**
a. Penile fracture b. Bladder tumor
c. Bladder stone d. Bladder polyp

65. **Earliest symptom of BEP is**
a. Urgency b. Nocturia
c. Frequency d. Poor stream

benign enlargement of prostate

66. **Investigation of choice in renal trauma is**
a. USG b. IVG
c. X-ray d. CT scan

☞ *CT grading of renal trauma is the basis of management and determines the prognosis.*

67. **Most common site of gastrointestinal tuberculosis is**
a. Stomach b. Large intestine
c. Ileocaecal region d. Colon

☞ *Ileum and caecum are the most common sites for involvement of GI TB. Clinical features are abdominal pain (at times similar to appendicitis), swelling, obstruction, hematochezia and palpable mass. Anal fistulae if seen prompts to look for rectal TB.*

Obs/Gyne

68. **Maternal diabetes may lead to .....in fetus**
a. Neural tube defect
b. Vaginal adenocarcinoma
c. congenital goiter
d. caudal regression syndrome

69. **In a 9 wks fetus erythropoiesis takes place in**
a. yolk sac b. liver
c. spleen d. bone marrow

70. **Surgical treatment of cervical incompetence is**
a. Encirclage operation
b. Conization
c. Pull through operation
d. all

71. **Which of the following intrauterine device is associated with highest risk of ectopic?**
a. Progestasert b. Cu T 380
c. LNG d. Lippies loop

☞ *Progestasert is progesterone (18 mg) containing IUD. It is no longer manufactured.*

72. **Average duration of second stage of labour in Multipara is**
a. 15 min b. 1 hour
c. ½ hour d. 2 hour

☞ *Average duration of second stage is ½ hour in multipara and 2 hours in primipara.*

73. **Spalding sign is usually seen..... after IUFD.**
a. 1 week b. 2 weeks
c. 3 weeks d. 4 weeks

☞ *Irregular overlapping of cranial bones one over the other is called as spalding sign. It is due to liquefaction of the brain and softening of the ligamentous structures supporting the vault. It occurs 7 days after death.*

74. **Umbilical cord has**
a. 1artery and 2 veins
b. 2 arteries and 1 vein
c. artery and 1 vein
d. 2 arteries and 2 veins

☞ *Initially has 2 arteries and 2 veins. 1 vein regresses normally.*
☞ *Presence of single umbilical artery suggests underlying congenital malformations in fetus that must be looked for.*

75. **Which anti hypertensive cannot be used in PIH?**
a. Labetalol b. Nifedipine
c. Alpha methyldopa d. Enalapril

Anti hypertensives contraindicated in pregnancy are:
☞ *Diuretics*
☞ *ACE inhibitors*

ANSWERS

61.a. Duodenal atresia	62.a. 4 °C	63.a. AFP
64.b. Bladder tumor	65.c. Frequency	66.d. CT scan
67.c. Ileocaecal region	68.d. caudal regression ...	39.c. spleen
70.a. Encirclage operation	71.a. Progestasert	72.c. ½ hour
73.a. 1 week	74.a. 2 arteries and 1 vein	75.d. Enalapril

76. **The most common site of ectopic is**
a. Isthmus b. Ampulla
c. Cervix d. Ovary

77. **Clue cell is seen in**
a. Gonorrhoea b. Syphillis
c. Bacterial vaginosis d. all

78. **Meigs' syndrome consists of all except**
a. Fibroma
b. Pleural Effusion
c. Ascites
d. Pericardial Effusion

☞ *Meigs' syndrome occurs in ovarian malignancy.*

79. HELPERR procedure is used for management of
a. Shoulder Dystocia
b. Breech delivery
c. Occipito anterior position
d. Twin delivery.

80. Which of the following is not useful in ectopic?
a. Methotrexate b. KCL
c. Actinomycin d. Misoprostol

81. Acrosome of sperm is formed by
a. Golgi apparatus b. Mitochondria
c. Nucleus d. Ribososme

82. The weight of matured placenta is
a. 1kg b. 500gm
c. 250 gm d. 750gm

83. Fern test is due to
a. Oestrogen b. Progesterone
c. Both d. FSH

84. Softning of cervix as early as 6th week is called
a. Osiander's sign b. Hegar's sign
c. Chadwick's sign d. Goodell's sign

85. Shortest diameter of fetal skull is
a. Biparietal
b. Bitemporal
c. Bimastoid
d. Submentobregmatig

86. The normal weight of uterus is
a. 100gm b. 150gm
c. 200gm d. 60gm

87. Most common organism to affect IUCD is
a. Candida b. Actinomycosis
c. Gardenella d. Gonorrhoea

88. First post partum visit should be ..... according to NEMN guidelines.
a. within 72hours b. within 4-7 days
c. within 42 days d. within 24 hours

89. Breech with legs extended is known as
a. Complete b. Frank
c. Footling d. Incomplete

90. Milk ejection reflex is by
a. Oxytocin b. Prolatin
c. Oestrogen d. Progesterone

Milk production is by prolactin and ejection by oxytocin, that contracts the smooth muscles in lactiferous ducts.

ANSWERS

76.b. Ampulla	77.c. Bacterial vaginosis	78.d. Pericardial Effusion
79.a. Shoulder Dystocia	80.	81.a. Golgi apparatus
82.b. 500gm	83.a. Oestrogen	84.d. Goodell's sign
85.c. Bimastoid	86.d. 60gm	87.b. Actinomycosis
88.c. within 42 days	89.b. Frank	90.a. Oxytocin

91. In eclampsia there is .... Type of liver necrosis.
a. Centrilobular b. Mid-zonal
c. Peripheral d. Pale

Pediatrics

92. A newborn has pink trunk and cyanosed limb pulse 80/min coughs and active regular breathing then the APGAR score is
a. 6 b. 8
c. 9 d. 10

93. Moro reflex disappears by
a. 3 months b. 3 yrs
c. 6 months d. 9 months

94. Hypophophosphatemic rickets has ..... inheritance
a. X-linked dominant
b. X-linked recessive
c. Autosomal recessive
d. autosomal dominant

95. Down's syndrome is most commonly associated with
a. ASD b. VSD
c. TOF d. COA

96. What is the most important cause of infantile diarrhea worldwide
a. Rotavirus
b. Reovirus
c. Cytomegalovirus
d. campylobacter jejuni

97. The earliest clinical sign of improvement during the treatment of protein energy malnutrition is
a. appetite gain
b. gain in weight
c. change in colour of skin
d. change in apathy

98. Drug of choice for childhood ITP is
a. Gamma globin
b. Prednisolone

91.c. Peripheral	92.b. 8	93.a. 3 months		
94.a. X-linked dominant	95.b. VSD	96.a. Rotavirus		
	97.a. appetite gain	98.b. Prednisolone	99.b. TOF	

c. Bone marrow transfusion
d. All

99. Boot shaped heart with pulmonary oligaemia is seen in
a. VSD b. ASD
c. PDA d. TOF

☞ *Boot shaped heart occurs due to right ventricular hypertrophy due to increased workload of right heart to work against pulmonary valve atresia.*
☞ *Pulmonary oligemia is due to decreased pulmonary blood flow due to pulmonary valve stenosis.*

100. Flag sign is seen in
a. Kwasiorkor
b. Marasmus
c. Pellagra
d. Nephrotic syndrome

☞ *Flag sign is seen in hair due to alternating areas of hypo pigmented and normally pigmented hair.*

101. Acute flaccid paralysis is reported in age group
a. 10-20 b. 10-15
c. 5-15 d. upto 15

102. Pleomorphic rash is seen in
a. Chicken pox b. Measles
c. Mumps d. Scabies

☞ *Pleomorphic rash i.e. Rash in all its stages of development is seen at a time point. It is characteristic of chicken pox.*

103. Single Simian crease is seen in
a. Turner's syndrome
b. Down's syndrome
c. Patau syndrome
d. Edward's syndrome

Orthopedics

104. Cock-up splint is used for treatment of
a. Radial nerve injury
b. Median nerve injury
c. Axillary nerve injury
d. Ulnar nerve injury

105. The commonest cause of osteomyelitis is
a. Staphylococcus aureus
b. Haemophilus influenza
c. Salmonella
d. Streptococcus pyogens

ANSWERS

91.c. Peripheral	92.b. 8	93.a. 3 months
94.a. X-linked dominant	95.b. VSD	96.a. Rotavirus
97.a. appetite gain	98.b. Prednisolone	99.b. TOF
100.a. Kwasiorkor	101.d. upto 15	102.a. Chicken pox
103.b. Down's syndrome	104.a. Radial nerve injury	105.a. Staphylococcus aureus

106. The angle between neck and shaft of femur of adult is
a. 160°. b. 145°
c. 130° d. 125°

107. Which of the following is most urgent?
a. Compartment syndrome
b. Fracture neck of femur
c. Acute osteomyelitis
d. Compound fracture

Ophthalmology

108. Commonest causative organism of bacterial corneal ulcer is
a. Neisseria gonorrhea
b. Neisseria meningitides
c. C.diphtheria
d. Pneumococcus

109. Gunn sign is:
a. Silver wiring of arterioles
b. Deflection of veins at arteriovenous crossing
c. Copper wiring of arterioles
d. Tapering of veins on the either side of the crossings

110. Loss of tear secretion is due to lesion at
a. Ciliary ganglion
b. Sphenopalatine ganglion
c. submandibular ganglion
d. all

ENT

111. 'Tullio phenomenon' is seen in
a. Vestibular neuritis b. Menieres disease
c. Otosclerosis d. Otomycosis

112. Quinsy is most commonly caused by
a. S.aureus
b. S.epidermidis
c. Streptococcus pyogens
d. Haemophilus

PART-19

106.d. 125°	107.a. Compartment syndrome	108.d. Pneumococcus	
109.d. Tapering of veins ...	110.b. Sphenopalatine ganglion	111.b. Menieres disease	112.c. Streptococcus pyogens

113. Trotter's triad consists of all except
a. conductive deafness
b. Ipsilateral pain
c. Immobility of ipsilateral soft palate
d. Contralateral pain

114. Calorie test is used to test the function of
a. Lateral SCC semicircular canal
b. Posterior SCC
c. Cochlea
d. Vestibulo cochlear nerve

115. Deviated nasal septum is seen in ..... adults.
a. 10% b. 5%
c. 1% d. 70%

116. Most common sinusitis in children is ..... sinusitis.
a. Maxillary b. Sphenoidal
c. Ethmoidal d. Frontal

Psychiatry

117. Dreaming occurs in
a. Stage I NREM b. Stage II NREM
c. Stage III NREM d. REM sleep

118. Which of the following drug is used to treat nocturnal enuresis
a. Clomipramine b. imipramine
c. lorazepam d. fluoxitine

119. Most common type of OCD is
a. Washers b. Lockers
c. Dancers d. None

Dermatology

120. Condylomalata is seen in
a. Primary Syphilis b. Secondary Syphilis
c. Tertiary Syphilis d. Neonatal Syphilis

121. Regimen for single lesion leprosy consists all except
a. Rifampicin b. Ofloxacin
c. Minocycline d. Clofazimine

Anesthesia

122. Which of the following is not the constituent of RL
a. sodium b. magnesium
c. calcium d. lactate

123. The maximum safe dose of bupivacaine without adrenaline is 2.5 mg/kg. What is its safe dose with adrenaline?
a. 3mg/kg b. 7mg/kg
c. 3.5 mg/kg d. 2.5 mg/kg

☞ *Adrenaline helps to increase the dose of LA to be administered by constricting the blood vessels and decreasing its absorption.*

124. Which is the first reflex to appear during recovery of GA
a. Swallow reflex b. Lacrimation
c. Laryngeal reflex d. cornea reflex

125. Normal SpO_2 shown by pulse oximetry is
a. 100% b. 90%
c. 95-100% d. 97-98%

126. Which of the following is contraindicated in asthmatic?
a. Ketamine b. Propofol
c. Thiopentone d. all

127. Which of the following anesthetic causes hallucination?
a. Ketamine b. thiopental
c. Fentanyl d. Halothane

128. Which of the following is drug of choice for Anaphylaxis?
a. Adrenaline b. Anti-histaminic
c. IV fluids d. all

129. Entonox is
a. 50% O_2 and 50% CO_2
b. 50% O_2 and 50% NO_2
c. 50% O_2 and 50% NO
d. 50% O_2 and 50% N_2O

130. Wooden chest syndrome is seen with
a. Fentanyl b. Morphine
c. Ketamine d. Bupivacaine

☞ *Fentanyl causes rigidity of chest muscles, known as wooden chest syndrome.*

ANSWERS

106.d. 125°	107.a. Compartment syndrome	108.d. Pneumococcus
109.d. Tapering of veins ...	110.b. Sphenopalatine ganglion	111.b. Menieres disease
112.c. Streptococcus pyogens	113.d. Contralateral pain	114.a. Lateral SCC
115.c. 1%	116.c. Ethmoidal	117.d. REM sleep
118.b. imipramine	119.a. Washers	120.b. Secondary Syphilis
121.d. Clofazimine	122.b. magnesium	123.a. 3mg/kg
124.a. Swallow reflex	125.d. 97-98%	126.c. Thiopentone
127.a. Ketamine	128.a. Adrenaline	129.d. 50%O2 and 50%N2O

Case based questions

A. A child presents with an acute onset pain and swelling at the end of long bone associated with fever. He had history of Tonsillitis. On examination the child is febrile and dehydrated.

131. What is the most likely diagnosis?
- a. Acute Osteomyelitis
- b. Septic arthritis
- c. Reactive arthritis
- d. Osteosarcoma

132. What is the earliest sign you will find in X ray?
- a. Pus
- b. Periosteal reaction
- c. Sequestrum formation
- d. d. Involucrum

133. How long does that earliest sign asked in above question take to develop?
- a. 5 days
- b. 3-5 days
- c. 7-10 days
- d. Less than 15 days

134. What is the commonest site for the disease in question?
- a. Upper tibial metaphysis
- b. Upper femoral metaphysis
- c. Upper humeral metaphysic
- d. Lower femoral metaphysis

135. What is the commonest complication of above condition?
- a. Chronic osteomyelitis
- b. Pyogenic arthritis
- c. Pathological fracture
- d. Growth plate disturbance

ANSWERS

121.d. Clofazimine	122.b. magnesium	123.a. 3mg/kg
124.a. Swallow reflex	125.d. 97-98%	126.c. Thiopentone
127.a. Ketamine	128.a. Adrenaline	129.d. 50%O2 and 50%N2O
130.a. Fentanyl	131.a. Acute Osteomyelitis	132.b. Periosteal reaction
133.c. 7-10 days	134.d. Lower femoral metaphysis	135.a. Chronic osteomyelitis

B. A 52 years old male of chronic renal failure who missed hemodialysis for 5 episodes presents with complains of syncope and weakness. There is tingling and burning sensations of his limbs. He has not passed stool for last 4 days. Physical examination shows the features of chronic renal failure and loss of tendon reflexes.

136. What is the most probable abnormality?
- a. Hypokalemia
- b. Hyperkalemia
- c. Hypocalcemia
- d. Hypernatremia

137. On lab examination, serum potassium was 6.3mmol/L and S. creatinine was 3.1 mg/dl. Which of the following ECG changes is expected?
- a. Tall T waves
- b. Sine wave pattern and bradycardia
- c. Flattening of T waves
- d. All of above

Tall T waves are seen in mild hyperkalemia (< 6 mmol/L). Severe hyperkalemia causes bradycardia and sine wave patterns. Flattening of T waves, inverted T waves and U waves are features of hypokalemia.

138. What is the initial management if the patient is hemodynamically stable?
- a. Calcium gluconate and insulin dextrose regimen
- b. Hemodialysis
- c. Cardioversion
- d. Loop diuretics

139. Which of the following drugs are notorious for causing this condition?
- a. ACE inhibitors and ARBs
- b. NSAIDS
- c. Beta blockers, heparin and digoxin
- d. All of above

140. What is the serious risk of not correcting this condition instantly?
- a. Flaccid paralysis
- b. Cardiac arrest
- c. Hypotension and shock
- d. Worsening of CRF
- C. Ketamine

141. What is the primary site of action of ketamine?
- a. Thalamo-neocortical
- b. Cortex
- c. Thalamus
- d. Limbic system

ischemic heart disease (IHD)

142. Main mechanism of action of ketamine is:
a. Inhibits NMDA receptors
b. Acts through opioid receptor
c. Acts through GABA inhibitory mechanism
d. All of the above

143. What is the most common side effect of ketamine?
a. Increased ICP b. Hallucination
c. Tachycardia d. Hypertension

144. What is the IV dose of ketamine?
a. 2 mg/kg b. 2-10mg/kg
c. 7mg/kg d. 2-5 mg/kg

145. Which of the following is not contraindication of ketamine?
a. Head injury b. Eye injury
c. IHD d. Shock

☞ *Ketamine causes increase in blood pressure. Thus it is indicated in conditions where blood pressure may fall or in cases of shock.*

D. A 8kg child had multiple episodes of dirrhoea and vomiting. On examination he is lethargic, drinks poorly and skin pinch goes back slowly.

146. Which plan will you use for this case?
a. Plan A b. Plan B
c. Plan C d. Any

☞ *The given case denotes severe dehydration. Thus plan C is needed.*

147. 147.The child is 11 months old now, what is the amount of RL you gave in 1 hour?
a. 280ml b. 560ml
c. 240ml d. 200 ml

☞ *As the weight of the child is already been given to be 8 kg, age is not required for fluid calculation. In severe dehydration 100ml/kg of fluid is required. In child less than 1 year, 30 ml/kg of fluid is given in the first hour. Thus for above child 240 ml is required in first hour.*

148. What is the commonest cause of diarrhoea in chidren in Nepal?
a. Reo virus b. Rota virus
c. Shigella d. Salmonella

149. Which of the following is not constituent of ORS?
a. Sodium chloride
b. Potassium chloride
c. Gulcose
d. Sodium bicarbonate

150. What is the dose of zinc tab, you will giveto this child?
a. 10mg b. 20mg
c. 5mg d. 15mg

☞ *< 6 months = 10 mg zinc per day.*
☞ *>6 months = 20 mg zinc per day.*

ANSWERS

136.b. Hyperkalemia	137.b. Sine wave pattern ...	138.a. Calcium gluconate ...
139.d. All of above	140.b. Cardiac arrest	141.a. Thalamo-neocortical
142.a. Inhibits NMDA receptors	143.b. Hallucination	144.a. 2 mg/kg
145.d. Shock	146.c. Plan C	147.c. 240ml
148.b. Rota virus	149.d. Sodium bicarbonate	150.b. 20mg

E. A 40 years old male weighing 50 kg has burnt in his head without neck region, bilateral upper limb and whole right thigh region at around 6 pm. He was brought to nearest hospital at around 11 pm.

151. Calculate the percentage of burn.
a. 22% b. 27%
c. 32% d. 35%

Calculation of TBSA bur by 'Rule of 9'

Parts of body	Surface area in adult	Surface area in infant
Head and neck ♀	9% (7+2)	18%
Upper limbs (arm + forearm + hand)	9%+9% (4+3+2)	9%+9%
Lower limbs (thigh + leg + foot)	18%+18% (10+5+3)	13.5%+13.5%
Chest(front and back)	9%+9%	9%+9%
Abdomen(front and back)	9%+9%	9%+9%
External genitalia	1%	1%
Total	100%	100%

152. What is true about fluid requirement in this patient?
a. 3500 ml by 2 am b. 2700 ml by 2 am
c. 3500 ml by 7 am d. 2700 ml by 7 am

☞ *According to Parkland's formula, amount of the fluid required in first 24 hours since the time of burn injury (not since the patient reaches hospital) is given as: 4 × body weight × % of burn (in ml).*

☞ *Hence the amount of fluid will be = 4 × 50 × 35 = 7000 ml (of which half i.e. 3500 ml in first 8 hours since burn injury i.e. within 2 am).*

153. If the person has burn involving epidermis and dermis without underlying muscles and bones, what is the degree of burn?

a. 1st degree b. 2nd degree
c. 3rd degree d. 4th degree

154. What is the fluid of choice?

a. DNS b. NS
c. RL d. Dextrose 5%

155. Silver sulphadiazine is choice for dressing of the burn wound but it is contraindicated in infants due to:

a. Intense irritation
b. Chances of anaphylaxis
c. Risk of developing kernicterus
d. Less potency to prevent evaporation

☞ *Silver sulphadiazine (1 per cent) is the mostcommonly used topical agent. However, it should be avoidedin pregnant women, nursing mothers and infants less than twomonths of age because of the increased possibility of kernicterusin these patients.*

F. An alcoholic patient has severe epigastric pain radiating to back, nausea, vomiting, fever and feature of shock. On examination he has increased amylase.

156. What is the most likely diagnosis?

a. Perforated peptic ulcer
b. Acute pancreatitis
c. Acute cholecystitis
d. Chronic pancreatitis

157. Flank discoloration found in this case is called

a. Grey Turner sign b. Cullen's sign
c. Sentinel sign d. Colon cut off sign

158. What is gold standard diagnosis in this case?

a. Incresed amylase
b. Increased Lipase
c. Decreased calcium
d. USG

159. Ranson's criteria on admission includes all except

a. Blood glucose b. LDH
c. AST d. Serum calcium

160. What is the commonest cause of chronic pancreatitis?

a. Alcoholism
b. Gall stone
c. Hyperparathyroidism
d. Congenetial malformation

G. A female at 37 weeks of gestation comes with BP of 170/100, seizure and pedal edema.

161. What is the most likely diagnosis?

a. Eclampsia
b. Pre-eclampsia
c. Malignant hypertension
d. Pregnancy induced hypertension

☞ *Preeclampsia with fits/seizures is eclampsia.*

162. What is the drug of choice for seizure?

a. Diazepam b. Phenytoin
b. $MgSO_4$ d. Calcium gluconate

☞ *Magnesium sulphate is membrane stabilizer and neuro protector. It reduces motor endplate sensitivity to Ach and also blocks neuronal calcium influx. It however does not control hypertension.*

163. What is the total loading dose of MgSO4 in this case?

a. 5gm b. 10gm
c. 14gm d. 15gm

☞ *Dosing and route of magnesium sulphate : 4 gram intravenous and 10 gram intramuscularly, 5 gm in each buttocks. Then 5 gm in alternate buttocks each 4 hours till 24 hours after pregnancy or last fit, which is later.*

164. Which is not the sign of MgSO4 toxicity?

a. Respiratory rate less than 16
b. Absent patellar reflex
c. Urinary output less than 30 ml/hr for 4 hours
d. Dialated pupils

165. In Eclampsia should occur within ..... of convulsions according to national guideline.

a. 12 hours b. 24 hours
c. 12-24 hours d. 18 hours

ANSWERS

151.d. 35%	152. ?	153.c. 3rd degree
154.c. RL	155.c. Risk of developing ...	156.b. Acute pancreatitis
157.a. Grey Turner sign	158.b. Increased Lipase	159.d. Serum calcium
160.a. Alcoholism	161.a. Eclampsia	162.b. $MgSO_4$
163.c. 14gm	164.d. Dialated pupils	165. ?

H. A 27 years old primi gravida gives birth to 2.1 kg male child at 38 weeks of gestation.

166. The child has
- a. Low birth weight
- b. Very low birth weight
- c. Extremely low birth weight
- d. Normal birth weight

167. The new born has heart rate of 70 per min and blue extremities and poor respiration, what is the first thing you will do after initial steps?
- a. Give epinephrine
- b. Give volume expander
- c. Give bag and mask ventilation
- d. Give chest compression

168. According to national essential maternal and neonatal health care package, the first post natal visit should be
- a. Within 4-7 days
- b. Within 72 hours
- c. Within 42 days
- d. Within 24 hours

169. Which of the following is not the dangerous sign for new born?
- a. Not sucking well
- b. Fast breathing (greater than 60 per min)
- c. Grunting
- d. Sleeping 18-20 hours

170. False about new born care is
- a. Room should be kept above 25oC
- c. Breast feeding on demand
- b. Vitamin K 0.5mg IM should be given
- d. Bathing baby within 24 hours

I. A 40 year old patient has a severe pain in the MP joint of the big toe.

171. What is the most likely diagnosis?
- a. Pseudogout
- b. Gout
- c. Cellulitis
- d. RA

172. What is the commonest site for pseudogout?
- a. MP joint of big toe
- b. Knee
- c. Midfoot
- d. Ankle

173. What is the diagnosis of choice in case of gout?
- a. Serum uric-acid level
- b. X-ray foot
- c. Joint fluid aspiraton showing crystals
- d. None

174. The crystals of uric-acid are
- a. Rhomboid shaped
- b. Needle shaped
- c. Square shaped
- d. Round

175. The most common cause of gout is:
- a. Under excretion
- b. Over production
- c. Use of drugs
- d. Alcohol

J. A man had a head injury presented with lucid interval of one hour followed by headache and hemiparasis.

176. What is the most likely diagnosis?
- a. Subdural hematoma
- b. Epidural hematoma
- c. Parenchymal hemorrhage
- d. Sub-arachnoid hemorrhage

177. What is the pathological cause in above condition?
- a. Tear of middle meningeal artery
- b. Tear of bridging veins
- c. Vaso spasm
- d. Rupture of middle cerebral artery

Sites of Trauma for EDH
- *Blow over the lateral convexity (tempero-lateral part) of head may fracture squamous temporal bone and injure middle meningeal artery. This is the most common site of extradural hematoma.*
- ***Forehead**: Anterior ethmoidal artery*
- *Occiput or low behind ear: transverse sigmoid sinus*
- ***Vertex:** Sagittal sinus (since the pressure of veins is less, so only venous sinuses can strip the dura)*

178. CT-scan in this condition shows
- a. Lens shaped convex hyperdensity
- b. Crescent shaped concave hyperdensity
- c. Convex hypo density
- d. Concave hypodensity

179. A patient can open eye to verbal command, withdraws to pain, utters inappropriate words, what is his GCS?
- a. 5
- b. 9
- c. 10
- d. 11

180. What is the grading of this injury?
- a. Mild head injuries
- b. Moderate head injuries
- c. Severe head injuries
- d. Can be any

ANSWERS		
166.a. Low birth weight	167.c. Give bag ...	168.b. Within 72 hours
169.d. Sleeping 18-20 hours	170.d. Bathing baby ...	171.b. Gout
172.b. Knee	173.c. Joint fluid ...	174.b Needle shaped

175.a. Under excretion	176.b. Epidural hematoma	177.a. Tear of middle ...
178.a. Lens shaped ...	179.c. 10	180.b. Moderate head injuries

Glasgow coma scale

Best motor response	Best verbal response	Best eye opening
Obeys commands – 6	Normal or oriented conversation – 5	Spontaneous – 4
Localizes pain (brings hand up beyond chin with supra-orbital pain given) – 5	Confused (some degree of confusion and disorientation) – 4	To speech – 3
Withdrawal form pain (unable to lift hand past chin with supra-orbital pain but does pull away when nailbed is pinched– 4	Inappropriate words (random words or articulatory speech, but no conversational exchange) – 3	To pain – 2
Abnormal flexion (decorticate posturing) – 3	Incomprehensible sounds (moaning but no words) – 2	No response – 1
Extension to pain (decerebrate posturing)– 2	No sound – 1	
No motor response – 1	Intubated patient – T	

Interpretation:

15/15, no loss of consciousness but CT findings are positive: minor degree head injury

14-15/15 with LOC: mild head injury

9-13/15: moderate head injury

3-8/15: severe head injury

NMCLE - CHAITRA 2072

Anatomy

1. Cremasteric muscle/fascia originates from

a. Internal oblique muscle
b. External oblique muscle
c. Transversus abdominis
d. Fascia transversalis

- ***External oblique muscle forms:*** *Inguinal (Poupart) ligament, lacunar ligament & Cooper's ligament, superficial inguinal ring and external spermatic fascia.*
- ***Internal oblique muscle forms:*** *Cremasteric fascia/ muscle and conjoint tendon (inguinal falx) is common tendon of internal oblique and transversus abdominis.*
- *Fascia transversalis forms: internal spermatic fascia*

2. Direct hernia is differentiated from indirect hernia in relation to which of the following anatomical landmark?

a. Superior epigastric artery
b. Superficial epigastric artery
c. Inferior epigastric artery
d. Deep epigastric artery

Physiology:

3. Which of the following is a feature of exocrine gland?

a. Secretions are emptied through a duct
b. It consists of mucus & serous gland
c. Secretions are emptied into blood
d. It secretes hormone

4. Heart is called as a functional syncytium because

a. It contains sarcoplasmic reticulum
b. Recovery period is short
c. Compact arrangement of fibril & polarity of fibre
d. Gap junction is present

5. Which is not a female sex hormone?

a. FSH b. LH
c. Aldosterone d. Progesterone

6. Highest cholesterol content is present in:

a. HDL b. VLDL
c. LDL d. Chylomicrons

Biochemistry:

7. PH=7.16, HCO_3- =22, PCO_2=53, what is the condition?

a. Metabolic acidosis
b. Metabolic alkalosis
c. Respiratory acidosis
d. Respiratory alkalosis

Acid-base status	PH	PCO_2	HCO_3^-	Compensatory response
Metabolic acidosis	↓	↓	↓	Hyperventilation (immediate)
Metabolic alkalosis	↑	↑	↑	Hypoventilation (immediate)
Respiratory acidosis	↓	↑	↑	↑ renal HCO_3 reabsorption (delayed)
Respiratory alkalosis	↑	↓	↓	↓ renal HCO_3 reabsorption (delayed)

- ***Key:*** *Bold arrow = 1º disturbance; unbold arrow = compensatory response.*
- ***Normal values:*** *HCO_3- = 22-26 mEq/L (average: 24); PCO_2 = 35-45 mmHg (average: 40)*

8. The first step of Vitamin D synthesis takes place in skin. The site of vitamin D synthesis in skin is:

a. Hair follicle b. Keratinocytes
c. Sebaceous gland d. Sweat gland

- *Vitamin D synthesis takes place in keratinocytes of epidermis. Hair follicle, sebaceous gland and sweat glands are present in dermis but not in epidermis.*

9. All of the following has intracellular receptor except:

a. Thyroid hormone b. FSH
c. LH d. Insulin

10. Which of the following does not require insulin for glucose transport?

a. RBC b. Adrenal medulla
c. Kidney d. Brain

- *a>d; Brain utilizes glucose for metabolism normallyand ketone bodies during starvation but RBCsalways utilize glucose because they lackmitochondria for aerobic metabolism. Insulin-independent glucose uptake (@BRICK L) = Brain, RBCs, Intestine, Cornea, Kidney, Liver.*

4.d. Gap junction ...	5.c. Aldosterone	6.c. LDL
7.c. Respiratory acidosis	8.b. Keratinocytes	9.d. Insulin
10.a. RBC	11.b. Haptoglobulin	12.c. Ileum

10.a.	RBC	11.b.	Haptoglobulin	12.c.	Ileum
13.b.	CRF	14.c.	Aspirin	15.b.	Morphine
16.b.	β-blocker	17.c.	Streptomycin	18.c.	Methyldopa
19.d.	White Infract	20.a.	Adenomatous polyp	21.a.	Autoclave

11. **Which of following protein binds with hemoglobin?**
    a. Albumin b. Haptoglobulin
    c. Haemepexin d. X1-glycoprotein

12. **Stomach produces intrinsic factor which helps in the absorption of extrinsic factor (Vit B12). The absorption of Vit B12 occurs through:**
    a. Duodenum b. Jejunum
    c. Ileum d. Colon

Absorption of majority of nutrients take place in the jejunum, with the following exceptions:
- *Iron is absorbed as Fe_2^+ in duodenum*
- *Folate is absorbed in jejunum and ileum*
- *Vitamin B12& bile salts are absorbed in the terminal ileum, requires intrinsic factor.*
- *Water & lipids are absorbed by passive diffusion throughout the small intestine and fructose is absorbed by facilitated diffusion*
- *Sodium bicarbonate is absorbed by active transport and glucose & amino acids by co-transport.*

13. **Synthesis of vitamin D decreases in following condition:**
    a. Hypocalcemia b. CRF
    c. Hyperthyroidism d. Hypersplenism

Pharmacology:

14. **Which of the following is irreversible cycloxygenase inhibitor?**
    a. Indomethacin b. Piroxicam
    c. Aspirin d. Ibuprofen

- *Aspirin irreversibly inhibits platelet COX so that aspirin's antiplatelet effect lasts 8–10 days (the life of the platelet).*
  *[**Ref**: Basic and clinical pharmacology; Katzung et al 12/e, page 638]*

15. **Which of the following drug causes biliary colic?**
    a. Hyoscine b. Morphine
    c. Pethidine d. Diclofenac

- *Opioids especially morphine can cause spasm of sphincter of Oddi and can increase biliary duct pressure.*

16. **A patient of bronchial asthma has now been suffering from acute congestive glaucoma. Which of the following drug is to be avoided?**
    a. Parasympathomimetic
    b. β-blocker
    c. Acetazolamide
    d. Catomprost

17. **Which of the following antitubercular drug is contraindicated in pregnancy?**
    a. Pyrazinamide b. Rifampicin
    c. Streptomycin d. Ethambutol

- *Streptomycin is contraindicated, pyrazinamide and ethambutol are relatively unsafe but isoniazid and rifampin are safe drugs during pregnancy.*

18. **Which of the following antihypertensive drug is safe during pregnancy?**
    a. Captopril b. Losartan
    c. Methyldopa d. Thiazide diuretics

- *Methyldopa, hydralazine, atenolol, metoprolol, prazosin, nifedipine, clonidine are safe antihypertensive drugs during pregnancy. ACE inhibitors and ARBs are contraindicated, while thiazide diuretics, furosemide and propranolol and nitroprusside are relatively unsafe.*

Pathology:

19. **A patient with abdominal trauma had severe splenic Injury. He had to undergo splenectomy and coagulative necrosis was evident on the specimen. Histological finding of spleen is:**
    a. Green infarct
    b. Hemorrhagic infarct
    c. Red Infract
    d. White Infract

- *White /Pale (anemic) infarcts occur in solid tissues with a single (end-arterial) blood supply, such as heart, kidney, and spleen.*
- *Red (hemorrhagic) infarcts occur in loose tissues with multiple blood supplies, such as liver, lungs, and intestine (Red = reperfusion).*

20. **Which of the following polyp can have neoplastic changes?**
    a. Adenomatous polyp
    b. Hamartomatous polyp
    c. Peutz-Jegher polyp
    d. Hyperplastic polyp

PART-19

ANSWERS

1.a.	Internal oblique ...	2.c.	Inferior epigastric ...	3.a.	Secretions ...
4.d.	Gap junction ...	5.c.	Aldosterone	6.c.	LDL
7.c.	Respiratory acidosis	8.b.	Keratinocytes	9.d.	Insulin
10.a.	RBC	11.b.	Haptoglobulin	12.c.	Ileum
13.b.	CRF	14.c.	Aspirin	15.b.	Morphine
16.b.	β-blocker	17.c.	Streptomycin	18.c.	Methyldopa
19.d.	White Infract	20.a.	Adenomatous polyp	21.a.	Autoclave

19.d. White Infract 20.a. Adenomatous polyp 21.a. Autoclave

- *Colonic polyps are masses protruding into gut lumen producing sawtooth appearance. 90% are non-neoplastic and most often recto-sigmoid.*

1. ***Adenomatous:*** *These are precancerous. Malignant risk is associated with increase in size, villous histology and increased epithelial dysplasia. It is precursor to colorectal cancer (CRC). The more villous the polyp, the more likely it is to be malignant.*
2. ***Hyperplastic:*** *Most common non-neoplastic polyp in colon (> 50% found in rectosigmoid colon).*
3. ***Juvenile:*** *Mostly sporadic lesions in children < 5 years old. Juvenile polyposis syndrome is multiple juvenile polyps in GI tract which hasincreased risk of adenocarcinoma.*
4. ***Hamartomatous:*** *Peutz-Jeghers syndrome is autosomal dominant syndrome featuring multiple nonmalignanthamartomas throughout GI tract, along with hyperpigmented mouth, lips, hands, genitalia.*

Microbiology

21. Hospital linen is sterilized by:

a. Autoclave
b. Sodium Hypochlorite
c. 2% glutaraldehyde
d. Hot air oven

Note: *Go through the table for sterilization methods of common articles inReview note of microbiology.*

22. A 20 years old female went to get together party, she had chicken salad following which she had abdominal pain, fever, vomiting and diarrhea within 24 hours. Which of the following is the causative agent for this?

a. Salmonella
b. Staphylococcus
c. B. cereus
d. Clostridium perfringenes

Note: *Go through the table for food poisoning in Review notes of microbiology.*

23. A lady actor wearing nickel ear-ring had erythematous pruritus vesicles over ear. What is your diagnosis?

a. Anaphylactic reaction
b. Cytotoxic reaction
c. Cell mediated Hypersensitivity
d. Immune complex reaction

Note: *Go through the table for hypersensitivity in Review notes of microbiology.*

24. A patient is sero-positive for HbsAg. Rise of which of the following parameter indicates recent infection?

a. HBcAg
b. IgM Anti-HBc
c. IgG Anti-HBs
d. HBeAg

Note: *Go through the table for Hepatitis serological markers in Review notes of microbiology.*

25. Japanese Encephalitis is transmitted by the bite of:

a. Anopheles mosquito
b. Culex mosquito
c. Aedes mosquito
d. Sandfly

Note: *Go through the table for vector borne diseases Review notes of microbiology.*

26. False about pseudomembranous colitis is:

a. Caused by Clostridium difficile
b. Metronidazole is the effective treatment
c. Washing hands with alcohol will kill the spores
d. New gene has been implicated

- *Alcohols kills bacteria but has no action on spores and viruses.*

Community Medicine:

27. Prevalence is an indicator which is/ shows:

a. Number of new cases in a community
b. Relation between new cases, mortality & recovery in a community
c. Calculated by case control study
d. A rate, expressed per 1000

Incidence: *Number of new cases in a defined population during a specified time period*

- *Is a rate, expressed per 1000*
- *Attack rate and secondary attack rate are special types of incidence rates*
- *Can be determined from cohort study*

Prevalence: *Total current (old + new) cases in a defined population during a specified time period*

- *Is a proportion (not a ratio)*
- *Can be determined by cross sectional study*

Realtion between incidence and prevalence (given that population is stable and incidence & duration are unchanging): *Prevalence (P) ≈ incidence rate (I) × average disease duration (D).*

- *Prevalence describes balance between incidence, mortality and recovery in a community*
- *Incidence reflects causal factors*
- *Duration reflects the prognostic actors.*

28. **In a community of 2000 people, 10 people were diseased in 2015, the similar pattern of disease continued in the next year. Find the prevalence of the disease in 2 year period.**
a. 10/1000 people b. 20/1000 people
c. 30/1000 people d. 40/1000 people

☞ *Prevalence (P) ≈ incidence rate (I) × average diseaseduration (D).*
☞ *P = 10/2000 people × 2 years = 10/1000 people*

29. **Susceptibility of an individual means:**
a. Having resistance to disease
b. Likely to have disease
c. Innate resistance against any disease
d. None

30. **A randomized control trial comparing the efficacy of two drugs showed that difference between the two with a p-value of <0.05 is not significant. In reality, however the two drugs differ. This therefore is an example of:**
a. Type I error b. Type II error
c. Standard error d. None

Note: *Review the notes for errors in epidemiological study in high yield points of community medicine.*

ANSWERS

16.b.	β-blocker	17.c.	Streptomycin	18.c.	Methyldopa
19.d.	White Infract	20.a.	Adenomatous polyp	21.a.	Autoclave
22.a.	Salmonella	23.c.	Cell mediated ...	24.b.	IgM Anti-HBc
25.b.	Culex mosquito	26.c.	Washing hands ...	27.b.	Relation between ...
28.a.	10/1000 people	29b.	Likely to have disease	30.b.	Type II error

31. **Health is not related to:**
a. Social wellbeing
b. Physical wellbeing
c. Mental wellbeing
d. Occupational wellbeing

32. **Association of cohort study gives the idea of:**
a. Relative risk b. Odds ratio
c. Attributable risk d. Prevalence

33. **High infectivity & low pathogenicity indicates:**
a. Case b. Carrier
c. Pandemic d. Epidemic

34. **Best method to control leprosy under national leprosy eradication program is**
a. High risk prophylaxis
b. Mass chemotherapy
c. Health Education
d. Early diagnosis of condition and treatment

35. **Normal distribution / Gaussian curve is defined by the following relation:**
a. Mean > Median > Mode
b. Mean < Median < Mode
c. Mean = Median = Mode
d. Mean > Median < Mode

Note: *Review the notes for Gaussian/ Normal distribution curve in high yield points of community medicine.*

Forensic medicine and Toxicology:

36. **CO poisoning has more adverse effect on:**
a. Liver b. Brain
c. Kidney d. Skin

37. **A body was found dead and rigor mortis has developed all over the cadaver. The time since death is:**
a. 6-12 hours b. 8-15 hours
c. 4-8 hours d. 12-24 hours

☞ *Among the voluntary muscles, Rigor mortis first starts in the muscles of the eyelids (by 3-4 hours & in upper lid earlier)and lastly in the fingers & toes (by 11-12 hours). It takes about 12 hours to develop from head to foot, persists for another 12 hours & takes 12 hours to pass off (Rule of 12).*

38. **At the age of 16 years, ossification centre appears in**
a. Lesser trochanter b. Acromion
c. Ischial tuberosity d. Iliac crest

Note: *Review the table for appearance of ossification centre (Chapter: identification) in high yield points of Forensic medicine.*

39. **In a case of hanging, there is mark around the neck. This mark is an example of:**
a. Laceration b. Contusion
c. Bruise d. Imprint abrasion

40. **During putrefaction of body, what is maximum amount of putrefactive fluid collected in pleural cavity?**
a. 75 ml b. 150 ml
c. 200 ml d. 300 ml

Medicine:

41. **A 34 year old lady was diagnosed to be the case of primary hypothyroidism. Her TFT will show:**
a. ↓TSH, ↑T3, ↑T4 b. ↑TSH, ↑T3, ↑T4
c. ↑TSH, ↓T3, ↓T4 d. ↓TSH, ↑T3, ↑T4

46.a. Cardio embolic	47.a. Salicylate	48.c. RBC cholinesterase ...

42. A known case of COPD develops acute exacerbation. Which of following organism is responsible for yellowish sputum in this patient?

a. Pseudomonas
b. Hemophilusinfluenzae
c. Mycoplasma pneumoniae
d. Staphylococus aureus

Nontypable H. influenzaeis the most common bacterial cause of exacerbations of COPD; these exacerbations are characterized by increased cough, sputum production, and shortness of breath. Fever is low-grade, and no infiltrates are evident on chest x-ray. Nontypable strains also cause community-acquired bacterial pneumonia in adults, especially among patients with COPD or AIDS. The clinical features of H. influenzaepneumonia are similar to those of other types of bacterial pneumonia, including pneumococcal pneumonia. [Reference: Harrison's principle of internal medicine, 19th edition, page 1011]

43. A person has right sided headache and right sided eye pain, lacrimation & congestion. He is likely to have:

a. Migraine
b. Tension headache
c. Cluster headache
d. Secondary headache

44. Prophylaxis of migraine headache is done by using:

a. Sumatriptan b. Ibuprofen
c. Aspirin d. Propranolol

45. A patient has plasma osmolarity of 300 mOsm/L and urine osmolarity of 1200 mOsm/L. Which of the following is the diagnosis?

a. Central diabetes insipidus
b. Nephrogenic diabetes insipidus
c. Psychogenic polydipsia
d. Water deprivation

Amongst the options given here, urine can be more concentrated (increased osmolarity) on water deprivation only; in all other situations, there will be polyuria and less concentrated urine than normal.

ANSWERS

31.d. Occupational wellbeing	32.a. Relative risk	33.b. Carrier
34.d. Early diagnosis ...	35.c Mean = Median = Mode	36.b. Brain
37.d. 12-24 hours	38.c. Ischial tuberosity	39.d. Imprint abrasion
40.b. 150 ml	41.c. ↑TSH, ↓T_3, ↓T_4	42.b.
43.c Cluster headache	44.d. Propranolol	45.d. Water deprivation

46. A 16 years old girl had sudden loss of consciousness with weakness of left upper and lower limbs. On examination, BP was 140/86 mmHg and PR was irregularly palpable with 116 bpm. Which of the following is responsible for this stroke?

a. Cardio embolic b. Thrombotic
c. Hemorrhagic d. Traumatic

Cardioembolism is responsible for ~20% of all ischemic strokes. Embolic strokes tend to occur suddenly with maximum neurologic deficit present at onset.The most significant causes of cardioembolic stroke in most of the world are nonrheumatic (often called nonvalvular) atrial fibrillation(indicated by irregularly irregular pulse), MI, prosthetic valves, rheumatic heart disease, and ischemic cardiomyopathy.

47. Peritoneal dialysis is done for poisoning of:

a. Salicylate
b. Opioid
c. Bromide
d. Amphetamine poisoning

48. In OP poisoining, which of following is not true?

a. PAM is given to reverse nicotinic side effect (pralidoxime: PAM)
b. Intermediate reaction occurs within 24-48 hours
c. RBC cholinesterase level is less sensitive than plasma cholinesterase
d. Organophosphorus induced Delayed neuropathy occurs after 2 weeks

Atropine is the drug of choice in OP poisoning and is highly effective in counteracting peripheral muscarinic effects. Oximes (pralidoxime; PAM) reactivates phosphorylated Ach-esterase and works on nicotinic effects as well. Plasma cholinesterase is more sensitive and falls more rapidly and prior to RBC cholinesterase. OPIDN occurs 1-3 weeks after acute exposure to OP compounds while intermediate syndrome develops 1-4 days after the poisoning.

49. A 45 years old male have peripheral blood smear picture of myelocyte> 20% promyelocyte> 10%, basophil = 8%, Hb=9.8 gm%. Which is the likely diagnosis?

a. CML b. CLL
c. AML d. ALL

50. There are 2 p waves followed by a QRS complex in ECG. Then this is due to:

a. SA node fires at higher rate
b. SA node fires at slower rate

46.a. Cardio embolic	47.a. Salicylate	48.c. RBC cholinesterase ...
49.a. CML	50.c. Delay in conduction ...	51.b. Leukopenia

c. Delay in conduction through AV node
d. Higher rate of conduction through AV node

51. Which of following is not seen in acute endotoxemia?

a. Hypotension b. Leukopenia
c. Renal dysfunction d. Liver dysfunction

52. A patient presented to ER with several episodes of vomiting, rapid & deep breathing, marked dehydration and altered consciousness. He was admitted in ICU where his ABG report revealed PH=7.05, HCO_3−=14, PCO_2=38. This condition is treated with

a. NS, Insulin, KCl, antibiotic
b. NS, $NaHCO_3$, antibiotic
c. Insulin, KCl, antibiotics
d. NS, Insulin, NaHCO3, antibiotics

This is a case of Diabetic ketoacidosis. Replacement of IV fluids (initially NS) and administration of short acting IV insulin has got no doubt in management of DKA. Hence the debate is between use of either KCl or NaHCO3.

Although patients with DKA often have hyperkalemia due to insulin deficiency, they are usually severely K+ depleted. KCl (20 mEq/L) should be added to each liter of IV fluids when urine output is established and insulin has been administered. Potassium repletion should commence as soon as adequate urine output and a normal serum potassium are documented. If the initial serum potassium level is elevated, then potassium repletion should be delayed until the potassium falls into the normal range. The goal is to maintain the serum potassium at >3.5 mmol/L (3.5 meq/L).

Despite a bicarbonate deficit, bicarbonate replacement is notusually necessary. In fact, theoretical arguments suggest that bicarbonateadministration and rapid reversal of acidosis may impaircardiac function, reduce tissue oxygenation, and promote hypokalemia.The results of most clinical trials do not support the routineuse of bicarbonate replacement, and one study in children foundthat bicarbonate use was associated with an increased risk of cerebraledema. However, in the presence of severe acidosis (arterial pH<7.0), the ADA advises bicarbonate (50 mmol/L [meq/L] of sodiumbicarbonate in 200 mL of sterile water with 10 meq/L KCl per hourfor 2 h until the pH is >7.0).

[Reference: Harrison's principle of internal medicine, 19th edition, page 2419]

53. A girl presents to ER with chest pain and had flu like symptoms since last 4 days. Her ECG shows 3 mm elevation of ST segment in lead I-IV with concavity upwards. What is the diagnosis?

a. Acute pericarditis
b. Acute infective Endocarditis
c. MI
d. Acute rheumatic fever

Acute pericarditis is usually idiopathic and most cases of idiopathic pericarditis are presumedto be postviral, usually preceded by a recent flulike illness or by upperrespiratory or GI symptoms.The ECG shows ST elevation with upward concavity over the affected area, which may be widespread. PR interval depression is a very specific indicator of acute pericarditis. Widespread ST elevation (leads I, II, aVL and V1–V6) is shown. The upward concave shape of the ST segments and the unusual distribution of changes (involving anterior and inferior leads) help to distinguish pericarditis from acute MI.

54. Which of the following is not included in Child-Pugh scoring?

a. Serum bilirubin b. Prothrombin time
c. Ascites d. Liver enzymes

55. The triad of portal vein thrombosis, hematuria and anemia signifies:

a. Henoch schoenlein purpura
b. Hemolytic uremic syndrome
c. ITP
d. Paroxysmal nocturnal hemoglobinuria

56. A patient with COPD came to emergency department with shortness of breath, his SPO2 is 81%. Which immediate action will you take?

a. Give O_2 via O_2 mask
b. Give rest & sedation
c. Send for CXR
d. Send the Investigations

57. A known case of portal hypertension is rushed to ER with active bleeding in the form of vomitus. What active management would you not proceed for?

a. Vitamin K
b. Sengstaken-Blakemore tube
c. Octreotide
d. Oral propranolol

Patient is to be kept NPO and active interventions are done to control bleeding. Oral propranolol has role in primary and secondary prevention of

61.d. OP poisoning	62.c. Anemia of chronic disease	63.c. Boerhaave syndrome
64.a. Albumin level	65.b. Calculate fluid ...	66.b. Fusiform esophagus ...

variceal bleeding only.Primary prevention of variceal bleeding: If non-bleeding varices are identified at endoscopy, β-adrenoceptor antagonist (β-blocker) therapy with propranolol (80–160 mg/day) or nadolol is effective in reducing portal venous pressure.

☞ *Secondary prevention of variceal bleeding: Beta-blockers are used as a secondary measure to prevent recurrent variceal bleeding following successful treatment by endoscopic therapy.*

[Source: Davidson's principles and practice of

58.a. Metabolic acidosis	59.a. Hyperosmolar coma	60.b. Ventricular fibrillation

58. A patient, who was previously on insulin therapy, is now admitted in ICU. His ABG report shows PH =7.21, HCO_3= 16 & PCO_2 = 38. What is this condition?

a. Metabolic acidosis
b. Metabolic alkalosis
c. Respiratory alkalosis
d. Respiratory acidosis

59. A 64 years old male diabetic used to leave alone in his home and missed his medication in the morning. He develops excessive thirst, dizziness, confusion and faint attack. He was brought to ER by neighbors. What is the diagnosis?

a. Hyperosmolar coma
b. Ketoacidosis
c. Sepsis
d. Hypoglycemia

60. What is the most common cause of death in acute MI?

a. Atrial fibrillation
b. Ventricular fibrillation
c. Mitral regurgitation
d. Ventricular tachycardia

☞ *Ventricular fibrillation occurs in 5–10% of patients with acute coronary syndrome who reach hospitaland is thought to be the major cause of death in those who die before receiving medical attention.*

[Source: Davidson's principles and practice of medicine, 22nd edition, page 596]

ANSWERS

46.a. Cardio embolic	47.a. Salicylate	48.c. RBC cholinesterase ...
49.a. CML	50.c. Delay in conduction ...	51.b. Leukopenia
52.a. NS, Insulin, KCl, antibiotic	53.a. Acute pericarditis	54.d. Liver enzymes
55.d. Paroxysmal nocturnal ...	56.a. Give O_2 via O_2 mask	57.d. Oral propranolol
58.a. Metabolic acidosis	59.a. Hyperosmolar coma	60.b. Ventricular fibrillation

61. A 28 years male Ram pratap, after returning from his field, developed difficulty in breathing, lacrimation, increased salivation and urinary incontinence. He was rushed to ER of a zonal hospital. What is the diagnosis?

a. Opioid poisoning
b. Salicylate poisoning
c. Conversion disorder
d. OP poisoning

62. A known case of ulcerative colitis presents now with the history of dizziness, breathlessness, palpitation, fatigue and black colored stool. On investigation, his Hb is 9.2 mg%, MCV is 72 and serum ferritin level of 250 µg/dl. What is the diagnosis?

a. Thalassemia
b. IDA
c. Anemia of chronic disease
d. Sideroblastic anemia

☞ *Hb level is 9.2 mg% and MCV is 72; it indicates microcytic (< 80 fl) anemia. As the serum ferritin level is slightly raised but not decreased than normal, it has to be a case of anemia of chronic disease due to chronic ulcerative colitis.*

Diagnosis of Microcytic Anemia

Tests	Iron deficiency	Anemia of chronic disease	Thalassemia
Smears	Micro/hypo	N, Micro/ hypo	Micro/ hypo with targeting
S. iron (50-150 mcg/dl)	Decreases (<30)	Decreases (<50)	N to high
TIBC (300-360 mcg/dl)	**Increase (>360)**	Decr(<300)	N
% saturation transferrin	Decr (<10)	Decr(10-20)	30-80
Ferritin (50-200 mcg/L)	Decr (<15)	**Inc/N (30-250)**	50-300
Hb pattern	N	N	Abnormal

Surgery:

63. All of the following are medical conditions for pain abdomen except:

a. Acute leukemia
b. Diabetic Ketoacidosis

c. Boerhaave syndrome
d. Acute Intermittent porphyria

Boerhaave syndrome is spontaneous rupture of esophagus usually associated with violent retching or vomiting. The pressure in the esophagus increases rapidly, andthe esophagus bursts at its weakest point in the lower third,sending a stream of material into the mediastinum and oftenthe pleural cavity as well.

64. Which one of the following is not used as a tool for assessment of nutritional status in surgical patient?

a. Albumin level b. BMI
c. NUTREC score
d. Indirect calorimetry

Albumin is not a measure of nutritional status.Although a low serum albumin level (<30 g/L) is an indicator of poor prognosis, hypoalbuminaemia invariably occurs because ofalterations in body fluid composition and because of increasedcapillary permeability related to ongoing sepsis.

[Source: Bailey & Love's short practice of surgery, 26th edition, page 262]

65. Wallace rule of 9 is commonly used in burn patients. It is useful to:

a. Know severity of burn
b. Calculate fluid loss & manage with fluids
c. Classify the burn
d. Calculate prognosis

Importance of assessment of TBSA of burn:

The volume of fluid lost is directly proportional to the area of the burn.

TBSA involved in any burn dictates the size of inflammatory reaction and therefore the amount of fluid needed to control shock.

In children with burns over 10% TBSA and adults with burns over 15% TBSA, intravenous fluid resuscitation is required.

Major determinants of the outcome of a burn are percentage surface area involved (> 35% burn is usually fatal), depth of burns and presence of an inhalational injury.

66. Which of the following is not correct about achalasia cardia?

a. Manometry is gold standard for diagnosis
b. Fusiform esophagus is seen in chronic cases
c. Antireflux procedure with myotomy is the surgical management of choice
d. Bird beak appearance is seen in contrast study

67. Mesenteric lymphadenitis occurs with

a. Ulcerative colitis
b. Crohn's disc
c. Henoch schonlein purpura
d. Viral Infection

68. In which of following intracranial condition, trauma is necessary?

a. Extradural hematoma
b. Subdural Hematoma
c. Infratentorial Hemorrhage
d. Subarachnoid Hemorrhage

69. Blood is stored at

a. 0°C
b. 4°C
c. Room temperature
d. 20°C

70. Which is not related to Bariatric Surgery?

a. Gastric Bypass
b. Sleeve gastrectomy
c. Adjustable Gastric band
d. Whole stomach removal

The commonly performed bariatric surgeries are; Gastric banding, Sleeve gastrectomy, Roux-en-Y gastric bypass and Biliopancreatic diversion with or without a duodenal switch.

71. Which is not correct about congenital hypertrophic pyloric stenosis?

a. More common in first born male child
b. Pyloromyotomy is definitive treatment
c. Child vomits immediately after feeding
d. Seen immediately after birth of child

72. A patient was brought to Emergency department with pain abdomen and non-bilious vomiting. He is not likely to have

a. Duodenal atresia
b. Jejunal atresia
c. Duodenal stenosis
d. Wind-sock deformity

Bilious vomiting has to be specific feature of jejunal atresia as bile is drained into 2nd part of duodenum; while it may be of either type (bilious or non-bilious) in duodenal atresia. There are 4 types of duodenal atresia—complete; fibrous cord; duodenal stenosis and windsock deformity.

73. Which is not involved in proliferative phase of wound healing?

a. Chemotaxis
b. Formation of Granulation tissue
c. Epithelial migration
d. Wound maturation

☞ *Wound healing is divided into overlapping phages; hemostasis & inflammation; proliferation; and maturation & remodeling. Wound cannot get matured in proliferative phase.*

[Source: Bailey & Love's short practice of surgery, 26th edition, page 24]

74. Complication of massive blood transfusion:

a. Hypercalcemia b. Hyperkalemia
c. Hyperthermia d. Hypernatremia

75. Not a precancerous lesion amongst the following breast diseases:

a. Atypical lobular hyperplasia
b. Atypical ductal hyperplasia
c. Florid adenosis
d. Radial scar lesion

Precancerous breast diseases

1. *Slightly increased risk (1.5–2 times)*
   - *Hyperplasia, moderate or florid, solid or papillary*
   - *Papilloma with a fibrovascular core*
2. *Moderately increased risk (5 times): Atypical hyperplasia (ductal or lobular)*
3. *Insufficient data to assign a risk: Solitary papilloma of lactiferous sinus (intraductal papilloma) &Radial scar lesion*

[Source: Bailey & Love's short practice of surgery, 26th edition, page 809]

ANSWERS

61.d. OP poisoning	62.c. Anemia of chronic disease	63.c. Boerhaave syndrome
64.a. Albumin level	65.b. Calculate fluid ...	66.b. Fusiform esophagus ...
67.d. Viral Infection	68.a. Extradural hematoma	69.b. 4°C
70.d. Whole stomach removal	71.d. Seen immediately ...	72.b. Jejunal atresia
73.d. Wound maturation	74.b. Hyperkalemia	75.c. Florid adenosis

76. Incorrect about Meckel's diverticulum is:

a. Incidence is 2 % in general population
b. Situated at mesenteric border of ileum
c. Lies in the ileum within 2 feet of ileo-caecal junction
d. 5% of it has pancreatic cells

☞ *A Meckel's diverticulum is a persistent remnant of the vitellointestinalduct and is present in about 2 per cent of the population. It is found on the antimesenteric side of the ileum, commonly at 60 cm (2 feet) from the ileocaecal valve and is classically 5 cm (2 inch) long. A Meckel's diverticulum contains all three coats of the bowel wall and has its own blood supply. It is vulnerable to obstruction and inflammation in the same way as the appendix. In around 20 per cent of cases, the mucosa of a Meckel'sdiverticulum contains heterotopic epithelium of gastric, colonicor pancreatic type.*

77. Which of the following is false about splenic injury and its management?

a. Vaccination for pneumococci is done before splenectomy
b. Divided into 4 grading by American Association for the surgery of trauma (AAST)
c. Unstable patients should be operated for splenectomy.
d. Angiography has both diagnostic as well as therapeutic importance

☞ ***Reference:*** *The Washington Manual of Surgery; 6th edition page 398 & 399 Look for the Table 16-3: American Association for the Surgery of Trauma Spleen Injury Scale (2008 Version) and Figure 16-5: Algorithm for the diagnosis and management of traumatic splenic injury* 5 grade

Pediatrics:

78. Which is the most common congenital heart disease in children?

a. ASD
b. VSD
c. Coarctation of aorta
d. Tetralogy of Fallot

79. Which of the following is true about giving Zinc for treatment of diarrhea in children?

a. As long as the diarrhea persists
b. Should be given for 10-14 days
c. Can be given only after 6 month of age
d. Depending upon severity of diarrhea

80. A child had fever, sore throat and myalgia since last 5 days. Which of the following complication can occur?

a. Acute Rheumatic fever
b. ASOM

76.b. Situated at mesenteric ...	77.b. Divided into 4 ...	78.b. VSD
79.b. Should be given ...	80.a. Acute Rheumatic fever	81.b. Hypoalbuminemia

c. UTI
d. Rheumatoid arthritis

81. In a child with kwashiorkor, which of following feature is seen?
a. Muscle wasting
b. Hypoalbuminemia
c. Loss of subcutaneous fat
d. Hyperalbuminemia

82. 1.5 kg of baby has born at 30 weeks period of Gestation. He developed shortness of breath after 2 hours of life. He is likely to have:
a. Respiratory distress of prematurity
b. Transient Tachypnea of Newborn
c. Broncho-pulmonary dysplasia
d. Meconium Aspiration syndrome

83. The firstvisiblesexual development in puberty in a boy is:
a. Testes enlargement
b. Penile enlargement
c. Axillary hair
d. Pubic hair

☞ *In boys, the 1st visible sign of puberty and hallmark of sexual maturity rating (SMR)-2 according to Tanner's staging is testicular enlargement, beginning as early as 9 & half years. This is followed by penile growth during SMR-3.*
☞ *In girls the 1st visible sign of puberty and hallmark of SMR-2 according to Tanner's staging is the elevation of breast buds between 8 to 12 years of age. Menarche typically begins 2-2.5 years later, during SMR-3 or 4.*

84. An 11 years boy presented with fever and vomiting for 2 days. CSF study after LP shows high protein level and slightly low glucose with numerous lymphocyte. What is the diagnosis?
a. Acute bacterial meningitis
b. Tubercular meningitis
c. Acute viral meningitis
d. Encephalitis

85. An 8 year old child presented with fever 103 °C, pain in throat and running nose. On examination, normal tonsils, mild hyperemia of throat, clear chest and stable vitals were found. What is the next step?
a. Admit in children ward for I/V Penicillin
b. Cefixime + Paracetamol
c. Supportive management
d. 10 days of Amoxycillin

86. A mother presented to you with her 4 days old male baby who developed jaundice within 18 hours of life. Which of the following is the most unlikely cause?
a. Rh incompatibility
b. Hereditary spherocytosis
c. Physiological Jaundice
d. Sickle cell disease

☞ *Jaundice developing in first 24 hours of life is always pathological but never physiological in nature.*

87. A 10 years old child presented with facial edema, decreased urinary output and shortness of breath to your OPD. Which is the set of investigation you will send for?
a. Urine albumin, urine RME, RFT, CXR
b. CBC, RFT, Urine RME, CXR, ECG, Echo
c. CXR, ECG, Echo
d. CBC, CXR, Urine RME

Obstetrics and Gynecology:

88. Which of the following contraceptives can be used for longest duration?
a. Norplant b. Cu-T
c. Condom d. Depoprovera

89. Size of vaginal Ring pessary is determined by
a. Length of vagina
b. Degree of prolapse
c. Weight of female
d. Size of uterus

☞ *Ring pessaries are effective in women with first- and second-degree prolapse, and the support ring's diaphragm is especially useful inwomen with accompanying anterior vaginal wall prolapse. Adigital examination is performed to assess vaginal length and width, and an initial estimation of pessary size is made.When properly fitted, the device should lie behind the pubic symphysisanteriorly and behind the cervix posteriorly.If a pessary is ideally fitted, a patient isnot aware of its presence. As a woman ages and gains or loses weight, alternate sizes may be required. [Reference: Williams' obstetrics 3rd edition]*

90. Level 1 support of uterus is
a. Cardinal ligament b. Broad Ligament
c. Perineal body d. Pericervical ring

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Noun: hyperemia
Increased blood in an organ or other body part
~ congestion

92.a. Undiagnosed cephalopelvic ...	93.c. 28	
94.d. Cervical cancer	95.a. effect upto 6 months	96. C ?

Supports of uterus:

- ***Upper tier (Level 1):*** *The upper most supports of the uterus primarily maintain the uterus in anteverted position. The responsible structures are: Endopelvic fascia covering the uterus, round ligaments and broad ligaments with intervening pelvic cellular tissues.*
- ***Middle tier (Level 2):*** *This constitutes the strongest support of the uterus. The responsible structures are: Pericervical ring, pelvic cellular tissue (the endopelvic fascia)*
- ***Inferior tier (Level 3):*** *The support is principally given by the pelvic floor muscles(levatorani), endopelvic fascia, levator plate, perineal body, and the urogenital diaphragm.*

ANSWERS

76.b. Situated at mesenteric ...	77.b. Divided into 4 ...	78.b. VSD
79.b. Should be given ...	80.a. Acute Rheumatic fever	81.b. Hypoalbuminemia
82.a. Respiratory distress ...	83.a. Testes enlargement	84.b. Tubercular meningitis
85.c. Supportive management	86.c. Physiological Jaundice	87.a. Urine albumin...
88.b. Cu-T	89.a. Length of vagina	90.b. Broad Ligament

91. A 30 years old female has Eclampsia at 38 weeks period of gestation. How do you proceed for managing this patient?

a. ABC, seizure control, antihypertensive, stabilization, delivery
b. ABC, seizure control, stabilization, delivery
c. ABC, seizure control, antihypertensive, delivery, stabilization
d. ABC, seizure control, delivery, stabilization

- *After general management in terms of ABC monitoring, nursing care, fluids, antibiotics etc, anticonvulsant is the first line specific management for controlling the fits. In spite of anticonvulsants and sedative regime, if the BP remains > 160/110 mmHg, antihypertensive drugs should be administered. Otherwise,antihypertensive are not routinely advised for specific management of eclampsia.*
- *In majority of cases with antepartum eclampsia, labour starts soon after convulsions. But when labour fails to start, the management depends upon whether the fits are controlled or not and the maturity of the fetus. The decision to deliver is made once the women is stable.*

[Source: D C Dutta's text book of obstetrics, 7th edition, page 234, 235 & 236.]

92. During the progress of 2nd stage of labour, head was not able to pass below mid pelvis. What might be the cause?

a. Undiagnosed cephalopelvic disproportion
b. Deep transverse arrest of Head
c. Placenta Previa
d. Abnormal bony configuration

93. Antepartum hemorrhage is said to have happened after ..... weeks of pregnancy.

a. 18 b. 20
c. 28 d. 32

94. Most common cause of bleeding per vaginum in 72 years old female is

a. DUB
b. Atrophic endometritis
c. Atrophic vaginitis
d. Cervical cancer

- *30-50% of postmenopausal bleeding is attributed to malignancy of genital tract, commonest being endometrial cancer, cervical cancer and ovarian tumors. Common benign conditions are endometrial hyperplasia and polypi.*

[Shaw's text book of Gynaecology, 16th edition, page 71]

95. Lactational amenorrhea is related to temporary post-natal infertility. This has

a. effect upto 6 months
b. effect upto 12 months
c. effect upto 9 months
d. effect upto 15 months

96. Most common malignant tumor of ovary during pregnancy is:

a. Sex cord tumor b. Mature teratoma
c. Dysgerminoma d. Brenner tumor

- *Benign tumors are far more common than malignant tumors of ovary during pregnancy (> than 90%) Malignancies have an incidence of approximately 1 per 1000 pregnancies (Brewer,2011). Ofthese, the three most common are breast—1 per 5000 pregnancies,thyroid—1 per 7000, and cervical—1 per 8500 (Smith,2003).*
- *Theincidence of ovarian malignancy during pregnancy ranges from1 in 20,000 to 50,000 births (Palmer, 2009; Eibye, 2013;Smith, 2003). In pregnant women, these are, indecreasing order of frequency, germ cell (dysgerminoma is the commonest germ cell tumor) sex cord-stromaltumors, low malignant potential tumors, and last, epithelialtumors (Morice, 2012).*

91.b. ABC, seizure ...	95.a. effect upto 6 months	96. C ?

[Reference: Williams' obstetrics 24th edition, page 1219 & 1228]

- *Most common ovarian tumor in pregnancy is benign cystic mature teratoma (dermoid cyst) which is followed by serous cystadenoma.*
- *Most common complication of ovarian tumor in pregnancy is torsion (commonly around 8-10 weeks or early puerperium.*
- *Most common ovarian tumor to undergo torsion in pregnancy is dermoid cyst.*

97. Which of following is not complication in di-amniotic dizygotictwins?

a. Vanishing twin b. Conjoined twins
c. Fetus papyraceous d. Superfecundation

98. In a case of pelvic vein thrombosis, the investigation of choice is:

a. Doppler study
b. CT scan
c. MRI
d. USG abdomen and pelvis

- *Duplex ultrasound is the initial investigation of choice in nearly all patients suspected with venous thrombosis. It has sensitivity of 98.7% and specificity of 100% for above knee DVT. Duplex ultrasound can be either Grayscale or color-Dopler study ultrasonography. MRI & CT venography are also quite helpful investigations.*

99. Most probable diagnosis for pain abdomen with or without fever in a pregnant women is:

a. Acute appendicitis
b. PID
c. UTI
d. Ectopic pregnancy

Ophthalmology:

100. A 40 years old patient of ankylosing spondylitis develops pain, lacrimation and sudden loss of vision. The diagnosis is

a. Choreo-retinitis
b. Acute iridocyclitis
c. Acute congestive glaucoma
d. Retinal detachment

101. Which of the following cataract in children should be operated on emergency basis?

a. Uniocular anterior polar cataract
b. Binocular polar cataract
c. Uniocular nuclear cataract
d. Binocular nuclear cataract

***Source:** Kanski's Clinical Ophthalmology; 7th edition; page 303*

102. In a one-year-old child having bilateral congenital cataract, which is following amblyopia is seen?

a. Stimulus deprivation amblyopia
b. Emmetropic amblyopia
c. Isometric amblyopia
d. Strabismic amblyopia

103. Most common presentation in a child with Retinoblastoma is

a. White eye reflex
b. Protrusion of eyeball
c. Ptosis
d. Painful eye

104. Ptosis is caused by which (N) Palsy?

a. 2nd cranial (N)
b. 3rd cranial (N)
c. 4th cranial (N)
d. Ophthalmic division of trigeminal (N)

Orthopedics:

105. X-ray finding of sequestrum is:

a. Dense
b. Lucent
c. Isodense with surrounding bone
d. Lytic

- *In X-ray, sequestrum appears dense than the surrounding bone because demineralization does not take place any more in dead bone.*

ANSWERS

91.b. ABC, seizure ...	92.a. Undiagnosed cephalopelvic ...	93.c. 28
94.d. Cervical cancer	95.a. effect upto 6 months	96. C ?
97.b. Conjoined twins	98.a. Doppler study	99.c. UTI
100.b. Acute	101.c. Uniocular nuclear ...	102.a. Stimulus deprivation ...
103.a. White eye reflex	104.b. 3rd cranial (N)	105.a. Dense

106. Fracture of shaft of humerus will lead to Injury of ..... nerve.

a. Median b. Axillary
c. Radial d. Ulnar

107. Commonest source of metastasis to bone is:

a. Breast b. Lung
c. Liver d. Kidney

- *The commonest source for metastatic bone tumor is carcinoma of the breast; next in frequency are carcinomas of the prostate (2nd), lung (3rd),*

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kidney, thyroid, bladder and gastrointestinal tract. ***[Source: Apley's System of Orthopedics and Fractures; 9th edition; page 216]***

108. Which of the following is most characteristic of osteosarcoma?

a. Osteoid formation
b. Lacy pattern of bone
c. Giant cell
d. Lytic lesion in epiphysis

109. Recurrent patellar dislocation is diagnosed by:

a. Patellar tapping
b. McMurray test
c. Apley's grinding test
d. Apprehension test

☞ *In 15–20 per cent of cases (mostly children)the first episode is followed by recurrent dislocationor subluxation after minimal stress. This is due, insome measure, to disruption or stretching of the ligamentousstructures which normally stabilize theextensor mechanism.*

☞ *More often the patella has reduced by the time the patient is seen. Tenderness and swelling may still be present and the apprehension test is positive: if the patella is pushed laterally with the knee slightly flexed, the patient resists and becomes anxious, fearing another dislocation. The patient will normally volunteer a history of previous dislocation.*

[Source: Apley's system of orthopedics and fractures, 9th edition, page 563]

110. Trendelenberg test is performed to test for ..... muscle.

a. Gluteus maximus b. Gluteus medius
c. Tensor Fascia lata d. Sartorius muscle

111. Stress fracture in children commonly involves

a. Tibia b. Fibula
c. Talus d. Humerus

☞ *Stress fracture of proximal third of tibial shaft is seen in children and it is the common site of stress fracture in playing group/ school going children.* ***[Source: Apley's system of orthopedics and fractures, 9th edition, page 724]***

112. A 4 year old boy presents to Ortho OPD with pain and excessive crying and forearm extended & pronated. While trying to examine, child cried more vigorously and X-ray of elbow joint showed no bony deformity. The doctor fully supinated the forearm, which makes child move his hand and calm instantly. The probable diagnosis is

a. Pulled elbow
b. Dislocation of radius
c. Subluxation of wrist joint
d. Subluxation of gleno-humeral joint

ENT

113. A 34 year old male develops rotatory vertigo lasting for few seconds, nausea and vomiting on standing while trying to place books on shelf. What is the further appropriate investigation?

a. Calorie test
b. MRI
c. Dix Hall pike test
d. Romberg test

Benign paroxysmal positional vertigo

☞ *Clinical diagnosis on the basis of history alone is BPPV. It can be confirmed by inducing characteristic (latent, geotropic and fatigable) nystagmus with Dix-Hallpike maneuver.*

114. Pleomorphic adenoma is

a. Most common tumor of parotid gland
b. Most common tumor of submandibular gland
c. Tumor of sublingual gland
d. Most common malignant salivary tumor

☞ *The tail of the superficial lobe of parotid gland is the most common site of occurrence for pleomorphic adenoma (70-80% cases, although this lesion can occur in any parotid location. The tumor is less commonly seen in submandibular gland (10%) and is seldom encountered in the sublingual gland (1%).*

115. A 10-years-old child has fever and right sided mastoid abscess. On examination tympanic membrane on that side is congested. Appropriate management is:

a. Incision, drainage and antibiotics
b. Cortical mastoidectomy
c. MRM
d. A course of antibiotic

116. A child has running nose, nasal obstruction, recurrent sneezing, watery eye and conjunctival congestion. Child is suffering from?

a. Allergic rhinitis
b. Bacterial conjunctivitis
c. Acute sinusitis
d. Chronic sinusitis

121.c. Black body ...	122.a. Ketamine	123.d. Suxamethonium
124.c. Asystole	125.d. Ringer lactate	126.b. Thought
118.c. Glottic	119.a. To relieve anxiety	120.a. Conscious sedation

117. Which is definitive treatment of nasal polyp?

a. Intranasal polypectomy
b. Extranasal polypectomy
c. FESS
d. Caldwell Luc operation

Functional endoscopic sinus surgery

118. Which of following laryngeal carcinoma has good prognosis?

a. Subglottic b. Supraglottic
c. Glottic
d. At the level of Hyoid bone

Glottis carcinoma is the commonest site of larynx (glottis – 59%, supraglottis – 40% and subglottis – 1%). Mostly originates on free edge and undersurface of anterior 1/3rd of true vocal cord.It is the earliest to present as hoarseness, has least predilection for neck node involvement and has the best prognosis (subglottic has the worst prognosis). Due to the paucity of lymphatics, glottic malignancy is highly radiosensitive.

Anesthesia

119. A very anxious boy of 6 years old has come for herniotomy. What is the main aim of your preanaesthetic medication?

a. To relieve anxiety
b. To relieve pain
c. To prevent from aspiration pneumonia
d. To prevent postoperative vomiting

120. Anesthesia given by a non-anesthetic person is

a. Conscious sedation
b. Mild sedation
c. Surgeons' anesthesia
d. Monitored anesthesia

Procedural sedation and analgesia, previously referred to as conscious sedation is a technique of administering sedatives or dissociative agents with or without analgesics to induce a state that allows the patient to tolerate unpleasant procedures while maintaining cardiorespiratory function. A nurse, doctor, or dentist gives conscious sedation in the hospital or outpatient clinic; most of the time it will not be an anesthesiologist.

ANSWERS

106.c. Radial	107.a. Breast	108.a. Osteoid formation
109.d. Apprehension test	110.b. Gluteus medius	111.a. Tibia
112.a. Pulled elbow	113.c. Dix Hall pike test	114.a. Most common ...
115.b. Cortical mastoidectomy	116.a. Allergic rhinitis	117.c. FESS
118.c. Glottic	119.a. To relieve anxiety	120.a. Conscious sedation
124.c. Asystole	125.d. Ringer lactate	126.b. Thought

121. O_2 cylinder has color coding

a. Complete black
b. Complete white
c. Black body with white shoulder
d. Complete blue

122. A patient had extradural hematoma and is planned for Burr Hole evacuation, which anesthetic agent should not be used?

a. Ketamine b. Halothane
c. Propofol d. Etomidate

123. A patient with paraplegia and cardiac problems planned for operation, which is contraindicated?

a. Atracurium b. Pancuronium
c. Vecuronium d. Suxamethonium

Contraindication of Suxamethonium: Hyperkalemia (massive soft tissue injury), head injury (raised ICP), Newborn and infants, Glaucoma & eye injuries (Raised IOP), Renal failure, Tetanus, GBS, Shock, Metabolic acidosis, Upto; 3 months after trauma, 6 months after hemiplegia and 1 year after burn.

Vecuroniumis most cardiovascular stable, so muscle relaxant of choice for cardiac patients.

124. DC shock cannot be used for:

a. Unstable atrial fibrillation
b. Ventricular fibrillation
c. Asystole
d. Pulseless ventricular tachycardia

Ventricular fibrillation, pulseless ventricular tachycardia and polymorphic ventricular tachycardia are the shockable rhythms while asystole and pulseless electrical activity are non-shockable rhythms for which the DC shock is of no use.

125. Fluid of choice during laparotomy:

a. DNS b. 5% dextrose
c. 0.45% NS d. Ringer lactate

Intraoperative fluid of choice for maintenance

In adults undergoing surgery under GA: Ringer's lactate (preferably) or normal saline (hyperglycemia is expected due to release of GH, cortisol and catecholamine; therefore dextrose free solutions are used.

In children (under either GA or Spinal or Epidural): Isolyte P (Children lack glycogen stores, hence glycogen containing solution is used)

In adults undergoing surgery underspinal or epidural anesthesia: 5% Dextrose + ¼ NS (hypoglycemia is expected due to sympathetic block in such patients, hence this combination is used. This combination of dextrose and normal saline is preferred over other combinations because it is isotonic.)

127.b. Dementia	128.d. Some people develop ...	129.a. Type I

Psychiatry:

126. Delusion is a disorder of
- a. False perception of stimulus
- b. Thought
- c. Personality
- d. Hallucination

127. A 72 years old female had personality changes, apraxia, progressive forgetfulness and occasional mutism without loss of consciousness. What is your diagnosis?
- a. Delirium
- b. Dementia
- c. Somatoform disorder
- d. Parkinsonism

☞ *The features are typical to Alzheimer's disease which is a very common cause of dementia.*

128. A child is diagnosed to have autistic disorder, which is true?
- a. It is fully reversible
- b. Only a few child will be developmentally sound
- c. Child will have normal development till 21 years
- d. Some people develop exceptional skill in later life

Dermatology:

129. A patient with multibacillary leprosy has multiple painfulerythematous lesions, thickening of nerve after 1 month of taking antileprotic drugs. Which of the following reaction has occurred?
- a. Type I
- b. Type II
- c. Erythema nodosum
- d. Fixed drug eruption

☞ *Type 1 (reversal) reactions occur in 30% of borderline patients (BT, BB or BL) and are delayed hypersensitivity reactions. Skin lesions become erythematous. Peripheral nervesbecome tender and painful, with sudden loss ofnerve function. These reactions may occur spontaneously, after starting treatment and also after completion of multidrug therapy. Type 2 reaction is also known as (erythema nodosumleprosum, ENL). [Source: Davidson's principles and practice of medicine, 22nd edition, page 349]*

130. An AIDS patient had pruriticpapular lesions over extensor surface of bilateral lower limb. What is the likely skin lesion?
- a. Lichen planus
- b. Dermatitis Herpetiformis
- c. Prurigonodularis
- d. Maculopapular rashes

COMPREHENSIVE STRUCTURED QUESTIONS

A. A mother presented to your OPD with her 7 month old baby with complaints of fever 101°F, cough & cold for 2 days for first time. On auscultation of chest, bilateral wheeze was present.

131. What is the most probable diagnosis?
- a. Bronchiolitis
- b. Bronchial asthma
- c. Pneumonia
- d. Bronchiectasis

132. What history would you take to rule out the differential diagnosis?
- a. History of atopy
- b. History of chest pain
- c. Siblings with stridor
- d. Family history of URTI

133. What investigation will you further do to rule out the other diagnosis?
- a. Pulmonary function test
- b. Chest X-ray
- c. ABG
- d. Sputum culture

134. What is the appropriate management?
- a. IV fluids
- b. Antibiotics
- c. Supportive
- d. Steroids

135. What will you give to the high risk patients?
- a. Antibiotics
- b. Steroid
- c. Monoclonal antibody
- d. Ibuprofen

☞ *Presentation of age (6 months to 2 years), 1st episode of symptoms (recurrent in asthma), no family history and bilateral wheeze are suggestive of bronchiolitis. Infective agents are respiratory syncytial virus (RSV) (in 50% cases), parainfluenza, adenovirus, mycoplasma and other viruses.*

☞ *History should be taken from the parents to exclude the diagnosis of bronchial asthma which also presents with similar chest findings. Such histories are perennial allergies, atopic dermatitis, allergic rhinitis in child or in family, wheezing other than with URIs, family history of asthma etc.*

127.b. Dementia	128.d. Some people develop ...	129.a. Type I

130.c.	131.a. Bronchiolitis	132.a. History of atopy
133.b. Chest X-ray	134.c. Supportive	135.c. Monoclonal antibody

- *X-ray is done to confirm the clinical diagnosis which shows hyperinflation with patchy atelectasis.*
- *Only supportive management is sufficient in terms of cold sponging, antipyretics and nasal decongestants /cough remedies. Hospitalization is required only if respiratory distress is present (may give trial of beta-2 agonist nebulization) or bacterial superinfections occurs. Steroids are not indicated at all. Ribavirin is not routinely used, it may prevent need for mechanical ventilation in severe cases. Prevention of severe complications is done by giving hyperimmune RSV IVIG or monoclonal antibody to RSV F protein (preferred: palivizumab) in high-risk patients only.*

ANSWERS

121.c. Black body ...	122.a. Ketamine	123.d. Suxamethonium
124.c. Asystole	125.d. Ringer lactate	126.b. Thought
127.b. Dementia	128.d. Some people develop ...	129.a. Type I
130.c.	131.a. Bronchiolitis	132.a. History of atopy
133.b. Chest X-ray	134.c. Supportive	135.c. Monoclonal antibody

B. A 27 years old female presents to the ER with central chest pain of 2 hours duration. On examination, her BP is 150/90 mmHg, PR is 110 bpm and ECG finding shows ST elevation in I-IV chest leads.

136. What is your diagnosis?

a. Anteroseptal wall MI
b. Inferior wall MI
c. Cardiomyopathy
d. Stable angina

Territory	Diagnostic changes	Vessel
Anteroseptal/apical	ST elevation or hyperacute T waves in V1-V4	LAD (mid or distal)
Lateral	ST elevation or hyperacute T waves in V4 to V6, aVL and lead I	LCX, Diagonal, marginal
Transmural Anterolateral	ST elevation or hyperacute T waves in V1 to V6, aVL and lead I	Proximal LAD
Inferior	ST elevation or hyperacute T waves in leads II, III and aVF At the same time 'reciprocal' changes of ST depression in leads I, aVL and the anterior chest leads	RCA (distal)
Posterior	Reciprocal changes i.e. ST depression and a tall R wave in leads V1–V4	PDA (RCA - 90%, LCX-10%)

137. Which drug is used immediately?

a. Indomethacin
b. Steroid
c. Enalapril
d. Aspirin+clopidogrel

138. Which of following drug is prescribed further for long term duration later?

a. Ramipril b. Atorvastatin
c. Aspirin d. Clopidogrel

- *The angiotensin-converting enzyme (ACE) inhibitors are widely used in the treatment of survivors of myocardial infarction, patients with hypertension or chronic IHD including angina pectoris, and those at high risk of vascular diseases such as diabetes.Several clinical trials have shown that long-term treatmentwith an ACE inhibitor (e.g. Enalapril 10 mg twicedaily or Ramipril 2.5–5 mg twice daily) can counteractventricular remodelling, prevent the onset of heartfailure, improve survival, reduce recurrent MI and avoidrehospitalisation. The benefits are greatest in those withovert heart failure (clinical or radiological) but extend topatients with asymptomatic left ventricular dysfunctionand those with preserved left ventricular function. Theyshould therefore be considered in all patients with acutecoronary syndrome for secondary prevention drug therapy.*
- *Atorvastatin is required as for hyperlipidemia, if present (lifestyle modification risk factor reduction). Clopidogrel should be given in combination with aspirin for at least 3 months. These are also very effective for secondary prevention drug therapy. As this combination has already been started as the primary management, the best answer here would be Ramipril.*

139. Which of following enzyme rises first?

a. CK-MB
b. Troponin I
c. All at the same time
d. LDH

- *CK starts to rise at 4-6 hours and Troponins are released within 4-6 hours (Davidson's principles and practice of medicine, 22nd edition)*

Markers	Time of initial elevation	Peak time	Time to return to normal
CK-MB	4-8 hours	12-24 hours	48-72 hours
Myoglobin	1-4 hors	8-10 hours	24 hours
Troponin I	3-5 hours	24-48 hours	5-14 days

(Source: Kaplan Notes for USMLE)

PART-19

136.a. Anteroseptal wall MI	137.d.	138.a. Ramipril
139.b. Troponin I	140.c. PCI	141.b. 5 to 10mg

140. In a hospital with optimal facility, what is the definite management of this condition which has presented within 2 hour of onset of pain?

a. Streptokinase b. CABG
c. PCI d. Aspirin

Percutaneous Coronary Intervention is the preferred treatment for STEMI as long as it can be performed expeditiously (door to balloontime less than 90-120 minutes) and by skilled personnel. It is also preferred in patients with contraindications for thrombolytic therapy; no risk of intracranial hemorrhage. Some trials (PAMI trial) showed that it reduces mortality more than t-PA.

C. Enalapril has now become the drug of choice in hypertensive patients.

141. Commercially, it is available in tablets of strength

a. 0.5 to 1 mg b. 5 to 10mg
c. 20 to 40 mg d. 40 to 80 mg

142. Which class of antihypertensive does it belong to?

a. Calcium channel blocker
b. ACE Inhibitor
c. Beta blocker
d. Angiotensin receptor blocker

143. Mechanism of action of enalapril is:

a. Diuresis
b. Vasodilation
c. Aldosterone antagonism
d. Blockage of ca^{++} channel

144. Most common side effect of this drug is:

a. Chest pain b. Dry cough
c. Bradycardia d. Ankle edema

145. Mechanism of action of side effect of the above drug is:

a. Vasodilation
b. Inhibition of bradykinin breakdown in lung
c. Hypersecretion
d. Decrease in venous return

D. A 22 years old female presents with history of amenorrhea for 3 months and pain lower abdomen for 2 days. On examination, there is minimal vaginal spotting with adnexal tenderness.Leucocyte count is 10,000/μL.

146. The most probable diagnosis is:

a. PID
b. Ruptured ectopic pregnancy
c. Acute appendicitis
d. Torsion of ovarian cyst

147. Initial Investigation to be done is:

a. USG b. HSG
c. Hysteroscopy d. Laparoscopy

148. How will you confirm diagnosis?

a. USG
b. Cystoscopy
c. Culdocentesis
d. β-hCG level + X-ray abdomen

149. What procedure is used for both diagnosis and treatment of this case?

a. Laparoscopy b. Laparotormy
c. CKG d. Cystocopy

150. Which of the following is the treatment modality of choice in above case?

a. Expectant management
b. Surgical only
c. Medical only
d. Medical+ Surgical

ANSWERS

136.a Anteroseptal wall MI	137.d.	138.a Ramipril
139.b Troponin I	140.c. PCI	141.b 5 to 10mg
142.b ACE Inhibitor	143.b Vasodilation	144.b Dry cough
145.b Inhibition of bradykinin ...	146.b Ruptured ectopic ...	147.a USG
148.c Culdocentesis	149.b Laparotormy	150.b Surgical only

E. A 30 years old female has pain abdomen and excessive vomiting. Her symphysiofundal height is more than gestational age.

151. What is the cause forheight of uterus being more than gestational age?

a. IUGR
b. IUFD
c. Wrong date
d. Molar+/orTwin pregnancy

152. The investigation of choice is:

a. ECG b. USG
c. Amniocentesis d. Laparoscopy

153. How will you assess the condition of the fetus?

a. Auscultate FHS b. CXR
c. CT d. ECG

154. Which of the following does not give rise to above condition?

a. Twin b. molar pregnancy
c. IUGR d. Gastritis

155. Definitive treatment of above condition is

a. Surgical b. Conservative
c. Medical d. Medical+surgical

F. A 40 years old male complains of back pain for 5 years with constitutional symptoms like fever, anorexia and weight loss.

156. Most common cause for this problem is:

a. Pott's spine
b. Ankylosing spondylitis
c. Multiple myeloma
d. Osteoporosis

157. Earliest X-ray finding is:

a. Reduction in disc space
b. Vertebral collapse
c. Bony erosion
d. Squaring of vertebral body

- *Loss of curvature of spine due to paravertebral spasm is the earliest X-ray feature in Pott's spine.*
- *Decreased joint space (decrease IVD space)is the next radiological feature of Pott's spine.*
- *Disc space collapse is typical of infection while in metastasis, disc space is preserved.*
- *TB usually involves vertebral body and malignancy usually involves posterior elements.*
- *Metastasis causes vertebral body collapse.*

158. Neurological deficit is due to:

a. Abscess compressing the spinal cord
b. Granulation tissue compression
c. Sequestrum pressing the cord
d. Inflammatory edema compressing the spinal cord

159. When is the surgical management recommended?

a. Progressive neurological deficit in spite of medical treatment
b. No improvement in motor power in spite of 3 months of conservative management
c. No improvement in fever in spite of 3 months of medical management
d. No improvement in motor power in spite of 6 months of conservative management

Absoluteindications for operative management:

- *Onset of paraplegia during conservative management*
- *Progressive loss of function or remaining stationary after 4 weeks of conservative management*
- *Severe paraplegia with rapid onset indicating severe pressure from abscess or mechanical accident*
- *Paraplegia of severe degree*
  a. *Paraplegia in flexion/ flaccid paralysis with motor or sensory loss for > 6 months*
  b. *Complete loss of motor power with bladder & bowel involvement for >1 month*
- *Paraplegia with such a degree of spasm that adequate rest is not possible*

160. Surgical management of choice when the medical management fails is:

a. Anterolateral decompression & bone grafting
b. Costrotransversectomy
c. Anterolateral decompression
d. Laminectomy and decompression

G. An8 years old female child presents with abdominal pain, oliguria, facial puffiness and swelling of lower extremities. She also gives history of passing cola colored urine.

161. Which is the probable diagnosis?

a. PSGN
b. HUS
c. PNH
d. Nephrotic syndrome

162. What history will you try to extract from the patient party?

a. Recent skin lesion b. Coryza
c. Fever d. Dyspnea

163. What is the prognosis of this disease?

a. Fatal b. Good
c. Chronic course d. Worse

164. The most important test is:

a. USG b. Urinary protein
c. C3 level d. RME for RBC casts

151.d. Molar+/or pregnancy Twin | 152.b. USG | 153.a. Auscultate FHS
154.c. IUGR | 155.d. | 156.a. Pott's spine
157.a. Reduction in disc space | 158.a. Abscess compressing ... | 159.a. Progressive neurological ...
160.a. Anterolateral decompression ... | 161.a. PSGN | 162.a. Recent skin lesion
163.b. Good | 164.c. C_3 level | 165.a. Seizure

171.a. Serum AST: ALT ratio is > 2:1		
172.c. Child-Pugh C	173.d. Ascitic fluid study	174.c. Splenomegaly

165. **The girl suddenly fainted, with vacant stare while you were examining in your OPD. The most probable cause is:**
   a. Seizure
   b. Thromboembolic phenomenon
   c. Hypoglycemia
   d. Hepatic coma

ANSWERS

151.d. Molar+/or Twin pregnancy	152.b. USG	153.a. Auscultate FHS
154.c. IUGR	155.d.	156.a. Pott's spine
157.a. Reduction in disc space	158.a. Abscess compressing ...	159.a. Progressive neurological ...
160.a. Anterolateral decompression ...	161.a. PSGN	162.a. Recent skin lesion
163.b. Good	164.c. C_3 level	165.a. Seizure

H. **A38 year old lady complains of mild to moderate pain and occasional bleeding while defecation with purulent discharge at present. On examination, inflamed indurated margin with an edematous skin tag was found.**

166. **Which of the following is a probable diagnosis?**
   a. Chronic fissure
   b. Perianal abscess
   c. Thrombosed hemorrhoid
   d. Infected fistula

167. **In the Park's classification of fistula in ano, which of the following type is not included?**
   a. Suprasphincteric b. Transphincteric
   c. Intersphincteric d. Infrasphincteric

168. **All are management options for second degree hemorrhoid except:**
   a. Manual dilatation of anus
   b. Barron's binding
   c. Sclerotherapy
   d. Milligan-Morgan's operation

169. **Not a complication of hemorrhoidectomy:**
   a. Fissure in ano b. Perineal abscess
   c. Stenosis d. Rectal prolapse

170. **Goodsall's rule has significance in:**
   a. Helping in decision of incision by surgeons
   b. Assuming position of internal openings
   c. Explaining the chronic course
   d. Calculating the prognosis

I. **A chronic alcoholic presents to ER with features of drowsiness, disorientation, profuse sweating, fixed pupil and gross distention of abdomen with flank fullness.**

171. **Which of the following is specific to alcoholic liver disease?**
   a. Serum AST: ALT ratio is > 2:1
   b. Serum ALT: AST ratio is > 2:1
   c. Both has severe but similar raise in serum level
   d. Only ALP raises very high

☞ *ALT and AST usually have a similar increase. The exception is in alcoholic hepatitis,in which the AST–ALT ratio may be >2:1.*

172. **His investigations shows: Hb – 9.2 mg%, TLC – 11300/mm³, platelet – 92000/mm3, TSB – 8 mg/dl (Direct – 4 mg/dl), S. albumin –29 g/L, PT – 5 sec more than control. Which Child-Pugh class does he fall into?**
   a. Child-Pugh A b. Child-Pugh B
   c. Child-Pugh C d. Child-Pugh D

☞ *Total Child-Pugh score here can be calculated by adding score for encephalopathy (marked – 3 score), TSB (4-10 mg/dL – 2 score), albumin (28-35 g/L – 2 score), prothrombin time (prolonged by 4-6 sec – 2 score) and ascites (marked – 3 score), which is found to be 12 for this person. An individual with score > 9 falls into Child-Pugh C class (<7 = Child A, 7-9 = Child B). [For details on Child-Pugh classification of prognosis in cirrhosis, review Box 23.30, page 944 of Davidson's principles and practice of Medicine, 22nd edition]*

173. **Systemic Bacterial peritonitis is ruled out through:**
   a. CBC, ESR b. Estimating SAAG
   c. USG d. Ascitic fluid study

174. **Cause of low patient count in this patient would be:**
   a. Bone marrow suppression
   b. Alcohol being toxic to platelet
   c. Splenomegaly
   d. Bleeding tendency

175. **Which of the following is not a classical feature of portal hypertension?**
   a. Ascites b. Variceal bleeding
   c. Splenomegaly d. Hepatomegaly

166.a. Chronic fissure	167.d. Infrasphincteric	168.a. Manual dilatation of anus	173.d. Ascitic fluid study	174.c. Splenomegaly
169.d. Rectal prolapse	170.b. Assuming position ...	171.a. Serum AST: ALT ratio is > 2:1		

I. A 26 days old male baby presented with non-bilious projectile vomiting with an olive shaped mass in left hypochondria and visible gastric peristalsis. He was suspected to be a case of infantile hypertrophic pyloric stenosis.

176. What is the incidence of IHPS in a new born?

a. 1:300 b. 1:900
c. 1:1800 d. 1:3000

177. Investigation of choice for diagnosing this condition is:

a. X-ray abdomen b. USG abdomen
c. CT scan abdomen d. MRI abdomen

178. First line of management is:

a. IV fluids
b. NG decompression
c. Surgical correction
d. NPO

179. Definite management of this would be:

a. Gastrojejunostomy
b. Gastrostomy
c. Pyloromyotomy
d. Billiroth operation

180. What is the mode of feeding in the child after surgical correction?

a. Continue IV fluids
b. Oral feeding of clear solutions is started as soon as possible
c. NG feeding
d. Feeding via duodenostomy tube

ANSWERS

166.a. Chronic fissure	167.d. Infrasphincteric	168.a. Manual dilatation of anus
169.d. Rectal prolapse	170.b. Assuming position ...	171.a. Serum AST: ALT ratio is > 2:1
172.c. Child-Pugh C	173.d. Ascitic fluid study	174.c. Splenomegaly
175. d.Hepatomegaly	176.a. 1:300	177.b. USG abdomen
178.a. IV fluids	179.c. Pyloromyotomy	180.b. Oral feeding of clear ...

1.c.	XXY	2.a.	Inferior venacava	4.b.	Medial pectoral nerve	5.b.	Has multiple nuclei	6.a.	ABO

NMCLE - SHRAWAN 2073

Anatomy

1. **Klinefelter's syndrome has chromosomal pattern of:**
   a. XO b. XYY
   c. XXY d. XX/XY

2. **Which of the following lies posterior to the epiploic foramina?**
   a. Inferior venacava
   b. Portal hepatis
   c. Pancreaticoduodenal artery
   d. Omentum

Epiploic foramen (foramen of Winslow) is a vertical slit like opening through which the lesser sac communicates with the greater sac. Its boundaries are:

- ***Anterior:*** *right free margin of lesser omentum containing portal vein, hepatic artery and bile duct*
- ***Posterior:*** *right suprarenal gland, inferior venacava and T12 vertebra*
- ***Superior:*** *caudate lobe of liver*
- ***Inferior:*** *1st part of duodenum and hepatic artery (horizonatal part)*

Clinical significance:

- *internal hernia into lesser sac occurs through epiploic foramen*

3. **Left gastric artery is the branch of:**
   a. Splenic artery
   b. Coeliac trunk
   c. Pancreatico-duodenal artery
   d. Mesenteric artery

Coeliac trunk is only 1.25 cm long arising at the level of IV disc between T1 & L1 from the front of abdominal aorta. It gives rise to 3 terminal branches;

1. ***Left gastric artery****: gives esophageal and gastric branches that anastomose with right gastric artery*
2. ***Common hepatic artery****: Gives branches as* ***gastro-duodenal artery*** *(right gastroepiploic artery & superior pancreaticoduodenal artery) and continues as* ***hepatic artery proper*** *to give rise to* ***right gastric artery, supraduodenal artery and finally hepatic artery proper ends by dividing into right hepatic artery (cystic artery is branch of right hepatic artery) and left hepatic artery***
3. ***Splenic artery****: is the largest branch and gives rise to* ***short gastric arteries****, left gastroepiploic artery, numerous pancreatic branches and splenic hilar branches.*

4. **Which one of the following is a branch of medial cord of brachial plexus?**
   a. Lateral pectoral nerve
   b. Medial pectoral nerve
   c. Suprascapular nerve
   d. Thoracodorsal nerve

- *Branches of medial cord are medial pectoral nerve, medial cutaneous nerve of arm, medial cutaneous nerve of forearm, medial root of median nerve and ulnar nerve.*

5. **All are true about cardiac muscle, except:**
   a. Act as syncytium b. Has multiple nuclei
   c. Has gap junctions d. Has branching

- *Each cardiac muscle has* ***a centrally placed nucleus*** *(skeletal muscle have dark & light bands and peripherally placed nucleus).*
- *Cardiac muscle fiber branch and interdigitate.*
- ***It functions as a syncytium because of the presence of gap junction.***
- *They have characteristic intercalated disc (where as skeletal muscle have cross striation and smooth muscle don't have both).*

Physiology

6. **A person is brought to emergency following RTA. The blood was sent for crossmatch. Which of the following must have been done?**
   a. ABO b. GRBS
   c. MP d. None

7. **A gentleman has blood pressure of 120/ 80 mmHg. How will you calculate his mean arterial pressure?**
   a. DBP + 2/3rd of SBP
   b. 1/3rd of SBP + 2/3rd of DBP
   c. 1/3rd of SBP + DBP
   d. 2/3rd of SBP + 2/3rd of DBP

- *Mean arterial pressure (MAP) = [Diastolic pressure + 1/3rd of pulse pressure] OR [2/3rd of diastolic +1/3rd of systolic]*
  Pulse pressure = Systolic BP - diastolic BP

3.b.	Coeliac trunk	6.a.	ABO	7.b.	1/3rd of SBP + 2/3rd of DBP

8.b. Raised ICP	9.a. Type II pneumocytes	13.b. Aldosterone antagonist	14.a. Erythromycin	15.b. Physostigmine

8. Increase in BP and decrease in pulse rate is seen in the state of:

a. Shock
b. Raised ICP
c. Raised JVP
d. Hypersensitivity

☞ *Cushing's reflex to raised ICP includes hypertension, bradycardia and periodic respiration (bradypnea).*

9. Which of the following secrete surfactant?

a. Type II pneumocytes
b. Type I pneumocytes
c. Goblet cells
d. Paneth cells

☞ *Surfactant is made up Phospholipid - di- palmitol - phosphatidyl choline (DPPC) + two major proteins having molecular weights of 32,000 and 10,000 KD. It is secreted by type II alveolar epithelial cells (Type II pneumocytes)*

Pathology

10. Shock is defined as

a. Hypotension
b. Hypoperfusion of tissue
c. Tachycardia
d. Hypotension with bradycardia

☞ *Shock is defined as the systemic state of low tissue perfusion which is inadequate for normal cellular respiration.*

11. Cancer cells derives energy from

a. Glycolysis
b. Oxidative metabolism
c. Increased mitochondria
d. None

12. If a Tharu woman from Dang with sickle cell disease has children from a Tharu man lacking the abnormal β-chain, you would expect:

a. 25% of their children to have sickle cell trait
b. 50% of their children to have sickle cell trait
c. 25% of their children to have sickle cell disease
d. All their children have sickle cell trait

☞ *Autosomal recessive disorder that results when the normal Hb A is replaced by the mutant Hb S. Sickle cell disease is caused by inheritance of two Hb S genes (homozygous). Since the woman is homozygous for the sickle cell gene and man is normal, all the children will have sickle cell trait.*

Pharmacology

13. Spironolactone has a good diuretic effect. How/ where does it act?

a. Na^+-K^+ symport
b. Aldosterone antagonist
c. Na^+-K^+-$2Cl^-$ cotransport
d. Carbonic anhydrase inhibitor

Classification of diuretics

1. *High efficacy diuretics (Inhibitors of Na^+-K^+-$2Cl^-$ cotransport): Sulphamoyl derivatives – Furosemide, Bumetanide, Torsemide*
2. *Medium efficacy diuretics (Inhibitors of Na^+-Cl^- symport)*
   - *(a) Benzothiadiazines (thiazides): Hydrochlorothiazide, Benzthiazide, Hydroflumethiazide, Clopamide*
   - *(b) Thiazide like (related heterocyclics): Chlorthalidone, Metolazone, Xipamide, Indapamide.*
3. *Weak or adjunctive diuretics*
   - *(a) Carbonic anhydrase inhibitors: Acetazolamide*
   - *(b) Potassium sparing diuretics*
     - *(i) Aldosterone antagonist: Spironolactone*
     - *(ii Inhibitors of renal epithelial Na+ channel: Triamterene, Amiloride.*
   - *(c) Osmotic diuretics Mannitol, Isosorbide, Glycerol*

Reference: *Essentials of medical pharmacology, KD Tripathi, 6th edition, page 561*

14. Drug used in the prophylaxis of diphtheria is:

a. Erythromycin
b. Doxycycline
c. Tetracycline
d. Ampicillin

☞ *Erythromycin is the DOC for diphtheria chemoprophylaxis (for acute treatment penicillin G is used).*

15. Which of the following is used as the antidote for poisoning with antimuscarinic drugs (atropine)?

a. Neostigmine
b. Physostigmine
c. Pyridostigmine
d. Naltrexone

☞ *Physostigmine is basically the only clinically useful AChE inhibitor that gets into the brain, a major target of atropine/ antimuscarinic poisoning. That is because it lacks the quaternary structure that nearly all the other common alternatives possess, and lacking that structure it can cross the blood-brain-barrier. Alternatives such as neostigmine,*

10.b. Hypoperfusion of tissue	11.a. Glycolysis	12.d. All their children ...
13.b. Aldosterone antagonist	14.a. Erythromycin	15.b. Physostigmine

20.d.	Increased gluconeogenesis	21.a.	Cytomegalovirus

pyridostigmine and others will combat peripheral effects of atropine poisoning, just as physostigmine will. Unfortunately, some of the CNS manifestations (like severe fever leading to seizures) contribute greatly to morbidity and mortality associated with high dose of antimuscarinics and the quaternary agents simply will not combat them in the CNS.

ANSWERS

1.c.	XXY	2.a.	Inferior venacava	3.b.	Coeliac trunk
4.b.	Medial pectoral nerve	5.b.	Has multiple nuclei	6.a.	ABO
7.b.	1/3rd of SBP + 2/3rd of DBP	8.b.	Raised ICP	9.a.	Type II pneumocytes
10.b.	Hypoperfusion of tissue	11.a.	Glycolysis	12.d.	All their children ...
13.b.	Aldosterone antagonist	14.a.	Erythromycin	15.b.	Physostigmine

16. Disulfiram like effect to alcohol is due to accumulation of which of the following in the blood?

a. Methanol b. Formic acid
c. Acetaldehyde d. Acetic acid

Biochemistry

17. Impaired glomerular permeability can be determined by

a. Albumin-creatinine ratio
b. Urea-creatinine ratio
c. GRF
d. None

18. Gluconeogenesis mostly occurs in

a. Liver b. Heart
c. Muscle d. Kidney

☞ ***Glycogenesis*** *takes place mainly in the liver and muscles where glycogen is stored.*

☞ ***Glycogenolysis****takes place mainly in the liver and muscles which store glycogen as reserve carbohydrate.*

☞ ***Gluconeogenesis*** *occur in liver (90%) and kidney (10%). When carbohydrate reserved in exhausted, normal blood glucose level is maintained by Glucose formed by this process. E.g. During starvation*

19. Homeostasis of Ca metabolism is controlled by all of the followings, except:

a. Calcitonin b. Calcitriol
c. Parathormone d. None

20. In a patient with starvation for 72 hours, which of the following would be seen:

a. Increased glycogenolysis
b. Increased ketosis due to break down of fats
c. Degradation of proteins
d. Increased gluconeogenesis

Microbiology

21. A man after renal transplant presents with parapneumonic effusion in right lung. Which may be the sinister organism involved?

a. Cytomegalovirus b. HSV
c. EBV d. Adeno virus

☞ *Although CMV disease may present as isolated fever, granulocytopenia, thrombocytopenia, or gastrointestinal disease, the foremost causeof death from CMV infection in the setting of transplantation ispneumonia. About 50% of all renal transplant recipients presenting with fever1–4 months after transplantation have evidence of CMV disease; CMVitself accounts for the fever in more than two-thirds of cases and thus isthe predominant pathogen during this period.*

*(**Reference:** Lippincott's illustrated reviews of Microbiology, 3rd edition, page 265 & Harrison's Principles of Internal Medicine 19th edition, page 921, 925 & 1191)*

22. Which one of the following is an example of type I hypersensitivity?

a. Atopy (bronchial asthma)
b. Acute rheumatic fever
c. SLE
d. Tuberculin test

☞ ***Note:*** *Go through the table for examples of hypersensitivity reactions in the review notes section of microbiology*

23. Hepatitis can be diagnosed even during window period with the help of antigen/ antibody titers. Which of the following marker is indicative of window period of hepatitis B infection?

a. HBsAg b. HBeAg
c. Anti-HBc IgG Ab d. Anti-HBc IgM Ab

☞ ***Antibody to HBcAg:*** *IgM Ab indicates recent/ acute infection (positive during window period), IgG Ab indicates prior infection or chronic infection.*

☞ ***Antibody to HBeAg:*** *Indicates low transmissibility and is present in window period*

☞ ***Note:*** *Go through the table and notes for hepatitis markers in the review notes section of microbiology*

16.c.	Acetaldehyde	17.a.	Albumin-creatinine ratio	18.a.	Liver	19.d.	None	22.a.	Atopy (bronchial asthma)	23.d.	Anti-HBc IgM Ab

24. Tyndallization is a method of

a. Preserving cultures
b. Inoculation of media
c. Growing bacteria in culture
d. Sterilization

Community medicine

25. If a patient of tuberculosis comes after 5 months of continuing ATT and is found to be AFB positive on sputum examination. What is this condition?

a. Return after default
b. Treatment failure
c. Relapse
d. Error of laboratory

Case definition of TB by previous treatment

1. ***New cases:*** *A patient who has never had treatment for TB or has taken AT drugs for < 4 weeks and has not been registered before*
2. ***Relapse cases:*** *A patient who has been cured or completed treatment but again has sputum smear positive TB*
3. ***Treatment failure cases:*** *A patient who remains or becomes sputum smear positive, ≥ 5 months after starting treatment*
4. ***Return after default:*** *a registered patient who has missed > 60 days (2 months) of ATT and is starting treatment for tuberculosis again.*
5. ***Transfer in cases:*** *A patient who transfers from one treatment centre to another where he has been registered in NTP*

26. Case control study is a type of:

a. Prevalence study
b. Retrospective study
c. Prospective study
d. Experimental study

27. Which of the following statement regarding dengue is correct?

a. Caused by 3 serotypes of dengue virus
b. Is endemic in Terai region of Nepal
c. Aspirin is used for treatment
d. Clinical course of dengue is more fulminant in children than adults.

28. World AIDS day is celebrated on:

a. Dec 1 b. April 7
c. March 6 d. Oct 24

29. If a vial of DPT vaccine is found frozen, what will you do?

a. Leave the vaccine to thaw and use
b. Discard the vaccine
c. Use after shaking
d. No problem using it

☞ *Cold chain temperature of DPT: +2⁰ to +8⁰C; if the vaccine gets frozen accidently, discard it.*

30. Which of the following scientists first described the relationship of health and environment?

a. Avicenna b. Perceleus
c. Charaka d. Hippocrates

☞ *Hippocrates, also known as father of medicine, was the first physician to reject superstitions, legends and beliefs that credited supernatural or divine forces with causing illness. He believed that disease were caused naturally and a punishment inflicted by the gods but rather the product of environmental factors, diet and living habits.*

ANSWERS

16.c. Acetaldehyde	17.a. Albumin-creatinine ratio	18.a. Liver
19.d. None	20.d. Increased gluconeogenesis	21.a. Cytomegalovirus
22.a. Atopy (bronchial asthma)	23.d. Anti-HBc IgM Ab	24.d. Sterilization
25.b. Treatment failure	26.b. Retrospective study	27.b. Is endemic in Terai ..
28.a. Dec 1	29.b. Discard the vaccine	30.d. Hippocrates

31. Which type of disease is commonly seen in Type A personality?

a. Stroke b. Heart disease
c. Diabetes mellitus d. Suicide

☞ *Though controversial, it is believed that when personality characteristics of a patient with coronary artery diseases are examined, there is preponderance of a coronary prone type A behavior.*

32. What is "continuous scrutiny of factors that determine the occurrence and distribution of disease and other conditions of ill health" called?

a. Surveillance b. Monitoring
c. Inspection d. Supervision

☞ ***Surveillance:*** *The continuous scrutiny of factors that determine the occurrence and distribution of disease and other conditions of ill health.*

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Past Questions

☞ ***Monitoring:*** *The Performance and analysis of routine measurements aimed at detecting changes in environment and health status of the population. Monitoring is one specific and essential part of Surveillance.*

33. Improved prevention of an acute, nonfatal disease is likely to:

a. Decrease the prevalence of the disease
b. Increase the prevalence of disease
c. Decrease the incidence of the disease
d. Increase the incidence of the disease

34. Body mass index (BMI) is calculated as:

a. Weight in Kg / (height in meter)^2
b. (Weight in Kg / height in meter)^2
c. (Weight in Kg)^2 / height in meter
d. Weight in Kg / (height in meter)^3

35. Which vaccine is contraindicated in pregnancy?

a. Rubella b. Diphtheria
c. Tetanus d. Hepatitis B

☞ *All live vaccines* ***(except yellow fever vaccine)*** *and meningococcal vaccines are contraindicated in pregnancy. E.g. BCG, OPV, MMR, Oral typhoid, Varicella, Influenza.*

36. Death in poliomyelitis is usually due to:

a. Hypertension
b. Respiratory paralysis
c. Aspiration
d. Arrhythmias

37. Specificity measures:

a. False positives b. True negative
c. True positives d. False negative

☞ ***Specificity*** *is defined as the ability of the test to identify correctly those who don't have the disease that is true negative (healthy or controls).*

☞ ***Sensitivity*** *is defined as the ability of the test to identify correctly those who have the disease i.e. true positives (cases).*

Forensic medicine

38. Which of the following is the specific antidote of opioid poisoning?

a. Naloxone b. Naltrexone
c. Physostigmine d. Atropine

☞ ***Note:*** *Go through the table for antidotes in the review note section of Forensic medicine*

39. Blue line in gum is seen in poisoning of:

a. Arsenic b. Lead
c. Mercury d. Dhatura

☞ *Blue line on gums is seen in lead specifically but also in Bismuth, Copper, Iron, Silver and Mercury poisoning.*

☞ *Other common features in lead poisoning apart from Burtonian line (blue line, lead line) are basophilic stippling, colic and constipation (dry belly ache, wrist and foot drop, dyspepsia, dysmenorrhea) encephalopathy and sterility.*

40. Regarding the rifle contact wound, true is:

a. Larger entry wound and smaller exit wound
b. Smaller entry wound and larger exit wound
c. Both wounds are smaller
d. Both wounds are larger

☞ *Entry wounds are usually smaller than the diameter of bullet, but in contact shot the skin is torn giving stellate appearance. The exit wound is always bigger than the bullet's diameter.*

41. A person was one eye blind. His another eye was injured by his neighbor. What type of injury is this?

a. Simple injury b. Grievous injury
c. Local injury d. Irreparable injury

42. How will you differentiate between human and animal bone?

a. Precipitin test
b. X-ray
c. Phenolphthalein (Kastle-Mayer) test
d. Orthotolidine test

☞ *Species (human vs animal) identification is easy when whole skeleton or entire bones are available. If some of the blood constituents are still present,* ***the precipitin test is useful****. Otherwise, there are generally three levels of identifications that can be utilized to distinguish between human and animal bone; gross skeletal anatomy (mainly cranial morphology & dentition), bone macrostructure (animal bones has less porous and thicker cortex) and histology (osteons in human cortical bone are scattered and evenly spaced whereas in many animals osteons tend to align in rows or form rectangular structure).*

43.b. Fact speaks for itself	44.a. Mitral regurgitation	45.c. O_2therapy

43. What does Res IpsaLoquitor mean?

a. Essence of crime
b. Fact speaks for itself
c. Oral testimony
d. Person is responsible not only for his actions but also for the logical consequences of those actions.

Internal medicine

44. Myocardial infarction is associated with many fatal complications even after survival from acute attack. Which of the following lesion is seen in MI?

a. Mitral regurgitation
b. Aortic regurgitation
c. Aortic stenosis
d. Mitral stenosis

☞ *Part of the necrotic muscle in a fresh infarct may tear or rupture, with devastating consequences. Rupture of the papillary muscle can cause acute pulmonary edema and shock due to the sudden onset of severe mitral regurgitation, which presents with a pansystolic murmur and third heart sound.*

Reference: *Davidson's Principles and practice of Medicine, 22nd edition, page 597*

45. The long term survival in COPD may be due to

a. Inhaled bronchodilator
b. Antibiotics
c. O_2therapy
d. Steroids

ANSWERS

31.b. Heart disease	32.a. Surveillance	33.c. Decrease the incidence ...
34.a. Weight in Kg / (height in meter)^2	35.a. Rubella	36.b. Respiratory paralysis
37.b. True negative	38.a. Naloxone	39.b. Lead
40.b. Smaller entry wound ...	41.b. Grievous injury	42.a. Precipitin test
43.b. Fact speaks for itself	44.a. Mitral regurgitation	45.c. O_2therapy

46. A HIV positive patient presents to you with occasional gum bleeding and joint swelling. On investigating, platelet counts, BT & PT were normal found to be normal and the PTT was increased. What is the most likely cause?

a. von Willebrand's disease
b. ITP
c. DIC
d. Hemophilia

☞ *More than 75% of patients with hemophilia A and about 50% of patients with hemophilia B are HIV-positive. However, these statistics should be decreasing with time, thanks to modern screening of donor blood. Hemarthrosis (knee being the most common site) is the most common presentation of the hemophilia. Hemophilia is X-linked recessive disorder and is caused due to deficiency or defect of factor VIII (Hemophilia A) and factor IX (Hemophilia B) coagulant protein.*

Laboratory findings of bleeding disorder

Condition	*Platelet count*	*BT*	*PT*	*PTT*
Hemophilia	*Normal*	*Normal*	*Normal*	*Increased*
vWD	*Normal*	*Increased*	*Normal*	*May be increased*
ITP	*Decreased*	*Increased*	*Normal*	*Normal*
TTP	*Decreased*	*Increased*	*Normal*	*Normal*
DIC	*Decreased*	*Increased*	*Increased*	*Increased*
Heparin	*Normal or decreased*	*Normal*	*Normal*	*Increased*
Warfarin	*Normal*	*Normal*	*Increased*	*Normal*
Liver disease	*Normal*	*Normal*	*Increased*	*Increased*

Fibrinogen level is decreased in DIC (a normal/elevated fibrinogen essentially rules out the diagnosis).

47. A 27 year old girl present with fever convulsion, neck rigidity. CSF Findings are protein 70 mg/dl. Sugar 30 mg/dl, chloride 101 µg/dl. What is the diagnosis?

a. Viral meningitis
b. Pyogenic meningitis
c. Cryptococcal meningitis
d. Tubercular meningitis

48. Peripheral pitting edema, tender hepatomegaly and enlarged neck veins are the classical features of:

a. Tension pneumothorax
b. Pulmonary edema
c. Left ventricular failure
d. Right ventricular failure

Cardinal features of heart failure

Left heart failure		*Right heart failure*	
Symptoms	*Signs*	*Symptoms*	*Signs*
Dyspnea on exertion, Orthopnea, Cardiac asthma (PND with nocturnal cough and Cheyne-Stokes breathing	*Gallop rhythm, pulsusalterans and bilateral basal crepitation on inspiration*	*Peripheral edema Abdominal distension (ascites), cough dyspnea and hemoptysis*	*Raised JVP, tender hepatomegaly, peripheral pitting edema, peripheral cyanosis and cardiac cachexia.*

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47.b. Pyogenic meningitis
48.d. Right ventricular failure

49. Microcytic hypochromic anemia is seen in:

a. IDA
b. Anemia of chronic disease
c. Megaloblastic anemia
d. Hemolytic anemia

☞ *Microcytic and hypochromic anemia are seen in sideroblastic anemia, Iron deficiency anemia, Thalassemia, Anemia of chronic disease (some case like long standing cases of RA; otherwise generally normocytic and normochromic picture is seen in anemia of chronic disease) and Lead poisoning (@SITAL)*

50 VMA (Vanillylmandelic acid) in urine is seen in which disease?

a. Conn's disease
b. Phaeochromocytoma
c. Renal cell carcinoma
d. Addison's disease

☞ *Excessive secretion of catecholamines in pheochromocytoma can be confirmed by measuring metabolites in plasma and/or urine (metanephrine and normetanephrine). Urine screen test for the presence of breakdown products of catecholamines*

a. Metanephrine
b. Vanillylmandelic acid, homovanillic acid, normetanephrine

☞ *Plasma metanephrines have been proposed by some investigators as a superior test to urine metanephrines, especially when clinical suspicion is high.*

51. A 55-year-old man with a history of type 2 diabetes, high blood pressure and high cholesterol presents to his physician for a routine checkup. He is obese (247 pounds) and his BMI is 36. He smoked 1 pack of cigarettes daily for 23 years. He has a family history of coronary artery disease and stroke. What is the most valuable action he should do to prevent a future stroke?

a. Control his blood sugar level
b. Control his serum cholesterol level
c. Lose weight
d. Stop smoking

52. After a minor head injury a young patient was unable to close his left eye and had drooling of saliva from left angle of mouth. He is suffering from:

a. VIIth nerve injury
b. Vth nerve injury
c. IIIrd nerve injury
d. Combined VIIth and IIIrd nerve injury

53. A patient was undergoing routine health checkup. In his ECG, there was tall t wave. This might be suggestive of:

a. Hypokalemia
b. Hyperkalemia
c. Hypophosphatemia
d. Hyperphosphatemia

Electrolytes	*Low serum concentration*	*High serum concentration*
Na^+	*Nausea and malaise, stupor, coma*	*Irritability, stupor, coma*
K^+	*arrhythmias, muscle weakness, decreased deep tendon reflexes ECG changes—**Flattened T waves, U waves (if severe)***	*Arrhythmias, muscle weakness, decreased deep tendon reflexes ECG changes—**Tall, peaked T waves, QRS widening, PR interval prolongation, loss of P waves, and finally a sine wave pattern***
Ca^{2+}	*Tetany, seizures, arrhythmias, hyperactive deep tendon reflexes ECG changes—**QT prolongation***	***Stones** (renal), **bones** (pain), **groans** (abdominal pain), **psychiatric overtones** (anxiety, altered mental status), but not necessarily calciuria ECG changes—**Shortened QT interval***
Mg^{2+}	*Tetany, Muscle twitching, weakness, tremors, hyperreflexia, seizures, mental status changes Coexisting hypocalcemia and hypokalemia ECG changes—**prolonged QT interval, T wave flattening, and ultimately, torsade de pointes***	*Progressive loss of deep tendon reflexes (classically the first sign), Facial paresthesia ECG changes **resemble those seen with hyperkalemia** (increased P-R interval, widened QRS complex, and elevated T waves).*
PO_4^{3-}	*Bone loss, osteomalacia*	*Renal stones, metastatic calcifications, hypocalcemia*

54. A HIV patient is under HAART regimen. How will you assess the improvement on the basis of laboratory markers?

a. P24 Ag level determination
b. HIV RNAtitres
c. CD8+ T cell count
d. CD4+ to CD8+ ratio

- *Plasma HIV RNA levels indicate the magnitude of HIV replication and the rate of CD4+ T cell destruction. CD4+ T cell counts indicate the current level of competence of the immune system.*
- *HIV RNA Determinations Facilitated by highly sensitive techniques for the precise quantitation of small amounts of nucleic acids, the measurement of serum or plasma levels of HIV RNA has become an essential component in the monitoring of patients with HIV infection. Patients with HIV infection should have CD4+ T cell measurements performed at the time of diagnosis and every 3–6 months thereafter. Treatment interruption is associated with rapid increases in HIV RNAlevels, rapid declines in CD4+ T cell counts, and an increased riskof clinical progression.*

Reference: *Harrison's Principles of Internal Medicine 19th edition, page 1248, 1281 & 1282*

55. Which one of the following clinical features is not seen in pheochromocytoma?

a. Hypertension
b. Episodic palpitations
c. Weight loss
d. Diarrhea

Clinical features of pheochromocytoma:

- *Hypertension (usuallyparoxysmal; often posturaldrop of blood pressure)*
- *Paroxysms of: Pallor (occasionally flushing), palpitations, sweating, headache, anxiety (angor animi)*
- *Abdominal pain, vomiting*
- *Constipation*
- *Weight loss*
- *Glucose intolerance*

Note:

- *Classic triad of symptoms are headache, diaphoriesis and palpitation.*
- *Most common symptom - Headache, Most common manifestation: Hypertension*

56. The sputum culture of a patient who has already started ATT category – I is found to be resistant against isoniazid and rifampicin both. What is the resistance status of this patient?

a. Poly-drug resistance TB
b. Multidrug resistance TB
c. Pre-extensive drug resistance TB
d. Extensive drug resistance TB

Types of resistance

1. ***Mono drug resistance TB*** *– Resistance to one first line anti TB drug.*
2. ***Poly drug resistance TB*** *– Resistance to INH or RIF (not both) with resistance to one or more other 1st line drugs.*
3. ***Multi****-drug resistant tuberculosis TB (MDR TB) – Resistance to both Isoniazid and Rifampicin.*
4. ***Pre-extensively drug****-resistant* ***(Pre-XDR)*** *– refers to MDR-TB that is also resistant to either a fluoroquinolone or a second-line injectable anti-TB drug (kanamycin, capreomycin, or amikacin) but not both.*
5. ***Extensively drug-resistant (XDR)*** *– refers to MDR-TB that is also resistant to both a fluoroquinolone and a second-line injectable anti-TB drug.*

57. In JVP, 'V' wave refers to

a. Atrial systole
b. Tricuspid valve closure
c. Atrial filling
d. Ventricular filling

Wave forms in JVP

- *'a' wave: Corresponds to right atrial systole (a=atrial systole) and occurs just before the first heart sound*
- *'c' wave: Closure of tricuspid valve (leading to bulging of tricuspid valve into RA) in isovolumetric contraction of RV (c=closure)*
- *'v' wave: is caused by right atrial filling during ventricular systole during which with blood with tricuspid valve closed (v= ventricular systole)*

(Reference: *Macleod's clinical examination, 12th edition, page 124)*

58. A truck driver from Birgunjpresented with history of fever since four weeks and dry cough. He also gives a history of weight loss of about 10 kg. X-ray shows bilateral reticulonodular infiltrates. The most likely diagnosis is:

a. Tuberculosis
b. Pneumocystis carinii pneumonia
c. Interstitial lung disease
d. Pneumococcal pneumonia

61.b. $T_2N_1M_0$	62.a. Pencil like smooth narrowing	63.c. Granulation tissue

> *Presence of prolonged fever, weight loss and bilateral reticulonodular infiltrates in a person at increased risk of HIV (long distance truck drivers) suggests a diagnosis of atypical pneumonia due to pnemoncystiscarinii.*

Surgery

59. Which of the following condition shows 'spider leg' pattern of calyces in IVU? Intravenous Urogram

a. Hydronephrosis
b. Polycystic kidney disease
c. Horse shoe kidney
d. Tuberculosis kidney

> *Spider leg calyces are the typical finding in IVU of polycystic kidney diseases.*

Indication for intravenous Urogram	*Finding*
Hydronephrosis	*Clubbing of calyces*
Horseshoe kidney	*Flower vase appearance*
Polycystic kidney disease	*Spider leg calyces*
Renal cell carcinoma	*Irregular filling defect; spider leg appearance*
Tuberculosis of kidney	*hydrocalyx, narrowing of calyx, stricture ureter which are often multiple with dilatations in between*

60. A child with appendicular lump is under the conservative management with antibiotic and other supportive measures. After 2 days, the lump increases in size with fever. How will you proceed further?

a. Aspiration and percutaneous drainage of pus
b. Increase the dose of antibiotics
c. Change antibiotic and CST
d. Go for immediate appendectomy

> *In this patient, the **Ochsner-Sherren regimen** is discontinued. As the size of the mass is increasing with rise of fever and also the common sequel of appendicular lump is abscess, extraperitoneal drainage of abscess is to be done followed by closing it with a drain in situ and continuous IV antibiotics. Interval appendectomy is done later after 3 months.*

ANSWERS

46.d. Hemophilia	47.b. Pyogenic meningitis	48.d. Right ventricular failure
49.a. IDA	50.b. Phaeochromocytoma	51.c. Lose weight
52.a. VIIth nerve injury	53.b. Hyperkalemia	54.b. 5HIV RNA titres
55.d. Diarrhea	56.b. Multidrug resistance TB	57.c. Atrial filling
58.b. Pneumocystis carinii pneumonia	59.b. Polycystic kidney disease	60.a. Aspiration and percutaneous ...

61. A breast mass of size 3 cm in size in the upper quadrant of breast with involvement of mammary lymph nodes but no sign of metastasis. How will you classify it according to TNM?

a. $T_1N_1M_0$ b. $T_2N_1M_0$
c. $T_1N_0M_0$ d. $T_1N_1M_1$

62. A patient suspected of achalasia cardia has been sent for barium meal study. It will reveal .... at/around the gastroesophageal sphincter.

a. Pencil like smooth narrowing
b. Stricture
c. Rat tail appearance
d. Shouldering

63. Proud flesh in the body is called for:

a. Excess muscle b. Excess skin
c. Granulation tissue d. None

64. Which of the following is brilliantly transilluminant?

a. Cystic hygroma b. Thyroglossal cyst
c. Infected hydrocele d. Ranula

> *Structures which are **brilliantly transilluminant** are vaginal hydrocele, epididymal cyst, cystic hygroma, ranula and meningocele.*
>
> ***Cross fluctuation can be elicited** in hydrocele-en-bisac (bilocular hydrocele), plunging ranula, psoas abscess and compound palmar abscess.*

65. A patient was operated successfully for acute cholecystitis and was improving well. But just before discharging on 4th postoperative day, he developed high grade fever with chills. What could be the cause?

a. Aspiration pneumonia
b. Catheter related UTI
c. Surgical site infection
d. Deep vein thrombosis

> *One third of the patient develop fever after surgery depending on type of surgery but only a small % turn out to be due to infection.*

Postoperative fever		
Postoperative day	*Cause of fever*	*Hint to remember (@5'W')*
1-2	*Aspiration pneumonia and pulmonary embolism*	*Wind*
3-5	*Catheter related UTI*	*Water*
4-6	*DVT, PE*	*Walking*
5-7	*SSI* Surgical Site Infection (SSI)	*Wound*
7+	*Drug fever, infection related to IV lines, or reaction to blood products*	*Wonder drugs*

64.a. Cystic hygroma	65.b. Catheter related UTI	66.b. Follicular carcinoma

66 **Long standing cases of goiter are likely to result in:**

a. Papillary carcinoma
b. Follicular carcinoma
c. Medullary carcinoma
d. Anaplastic carcinoma

☞ *An increased incidence of cancer (usually follicular) has been reported from endemic areas for nodular goiter. Dominant or rapidly growing nodules in long-standing goiters should always be subjected to aspiration cytology. (Reference: Bailey & Love's short practice of surgery, 26th edition, page 749)*

Etiology of Thyroid Malignancy

☞ ***Radiation**: Either external or radioiodine can cause papillary carcinoma thyroid.*
☞ ***Pre-existing multinodular goiter**: It turns into follicular carcinoma of thyroid.*
☞ ***Familial:**Medullary carcinoma thyroid is often familial*
☞ ***Hashimoto's thyroiditis**: It may predispose to NHL/papillary carcinoma of thyroid.*
☞ ***Genetic**: Cowden syndrome is differentiated thyroid carcinoma, carcinoma breast, and multiple hamartomas. It is due to germ cell mutation of PTEN tumor suppressor gene.*

67 **What is the treatment modality of mixed parotid tumor?**

a. Total parotidectomy
b. Superficial parotidectomy
c. Hemiparotidectomy
d. Any of the above

68 **Split skin graft can be applied over:**

a. Muscle b. Bone
c. cartilage d. Eyelid

☞ *Skin graft must be applied to a well vascularized recipient wound bed. It will not adhere to exposed bone, cartilage or tendon devoid of periosteum, perichondrium or peritendon respectively. For critical and small areas, such as an eyelid, a full thickness graft is selected so that contraction of the grafted material is minimum.*

69 **What is the most common extra-intestinal manifestation of Chron's disease of small intestine?**

a. Ankylosing spondylitis
b. Erythema nodosum
c. Iritis
d. Ureteral obstruction

Skin lesions are the most common extra-intestinal manifestations unlike in ulcerative colitis where arthritis is more common. Extra-intestinal manifestations of Crohn's disease

☞ ***Skin:** Erythema nodosum, pyoderma gangrenosum—most common*
☞ ***Eyes:** Iritis, uveitis*
☞ ***Joints:** Arthritis, ankylosing spondylitis*
☞ *Sclerosing cholangitis, Nephrotic syndrome, Pancreatitis, Amyloidosis*
☞ ***Blood:** Anaemia, thrombocytosis, DVT, arterial thrombosis*

70 **Lord's plication is used in the treatment of:**

a. Hydrocele
b. Inguinal hernia
c. Testicular malignancy
d. Varicocele

☞ ***Lord's plication** is a surgical procedure used for the treatment of hydrocele. The hydrocele fluid is drained and the redundant sac is plicated. It is used for treatment of small and medium sized hydroceles only.*

71 **What does BIRADS stand for?**

a. Breast imaging radiation and debridement surgery
b. Breast imaging reporting and data system
c. Breast imaging reporting and data statistics
d. Breast imaging radiation and drainage system

72 **Morbid obesity is indicative of bariatric surgeries. What operation is not advised for morbid obesity?**

a. Partial gastrectomy
b. Ileal transposition
c. Gastric bypass
d. Bilio-pancreatic diversion

☞ *Morbid obesity is a term used when BMI is more than 40 in a person.*

Classification of bariatric procedures:

1. ***Restrictive procedures**: Roux-en-Y gastric bypass (RYGBP), Laparoscopic adjustable gastric banding (reversible and highly safe bariatric surgical procedure), vertical band gastroplasty*
2. ***Malabsorptive procedures**: bilio-pancreatic diversion (BPD) & bilio-pancreatic diversion with duodenal switch*

3. ***Combined procedures***
Bowel transposition is not a surgical option for bariatric surgery; in fact is a surgical option for short bowel syndrome.

Pediatrics

73. All milk teeth have erupted by the age of:
a. 1.5 years b. 2 years
c. 2.5 years d. 3 years

74. Which of the following can prevent neural tube defect when administered in first trimester of pregnancy?
a. Niacin b. Iron
c. Riboflavin d. Folic acid

75. Which is the most common feature of kwashiorkor?
a. Muscle wasting
b. Edema
c. Diarrhea
d. Hyperalbuminemia

☞ *Marasmus is characterized by severe wasting; kwashiorkor is characterized by edema and marasmic-kwashiorkor is characterized by severe wasting + edema.*

ANSWERS

61.b. $T_2N_1M_0$	62.a. Pencil like smooth narrowing	63.c. Granulation tissue
64.a. Cystic hygroma	65.b. Catheter related UTI	66.b. Follicular carcinoma
67.b. Superficial parotidectomy	68.a. Muscle	69.b. Erythema nodosum
70.a. Hydrocele	71.b. Breast imaging reporting ...	72.b. Ileal transposition
73.c. 2.5 years	74.d. Folic acid	75.b. Edema

76. Breastfeeding is contraindicated in:
a. HCV infection b. AIDS
c. Galactosemia d. Neonatal jaundice

Absolute contraindications to breastfeeding
1. *Infants with galactosemia*
2. *HIV and HTLV (T-cell lymphotrophic virus type I or II) infection: In the United States and Canada, where a safe and culturally accepted replacement is available, breastfeeding is contraindicated. In other settings, health risks of not breastfeeding must be weighed against the risk of transmitting virus to the infant.*
3. *Mother is receiving diagnostic or therapeutic radioactive isotopes or antimetabolites or other chemotherapeutic agents.*
4. *Mother has herpes simplex lesions on a breast (the baby may feed from the other breast if free from lesions),*
5. *Tuberculosis infection: Breastfeeding is contraindicated until completion of approximately 2 weeks of appropriate maternal therapy.*
6. *Varicella-zoster infection: Infant should not have direct contact to active lesions (Infant should receive immune globulin)*
7. *Mother consumes alcoholic beverages – advise her that an occasional small amount of alcohol will not harm baby but to avoid breastfeeding for approximately two hours after drinking.*

The benefits of breastfeeding outweigh the risks in the following conditions:
1. *Mother is Hepatitis B surface antigen positive,*
2. *Mother is infected with Hepatitis C virus,*
3. *Mother is carrier of cytomegalovirus (except for possibly very low birth weight babies),*
4. *Mother smokes – advise her to give up smoking and not smoke in the home,*
5. *Baby born with jaundice and hyperbilirubinaemia – Occasionally, in rare cases like breast milk jaundice, breastfeeding may need to be interrupted temporarily for 24-48 hours when phototherapy is not available.*

*(**Reference:** Nelson's textbook of pediatrics, 20th edition and Health Service Executives' factsheet on contraindications to breastfeeding and USMLE step 1 Forum)*

77. A 13-year-old boy has a 1-day history of fever and lethargy, and was unable to be awoken this morning. In the emergency department his respiratory rate is 7 breaths/min, heart rate 55 bpm, temperature 105.8°F (41°C), and blood pressure (BP) 60/40 mm Hg. He has altered mental status, a stiff neck, and a purpuric rash over his trunk. Which of the following is the most appropriate next step in the management of this patient?
a. Measles
b. Meningococcemia
c. Chicken pox
d. Typhoid fever

☞ *This patient in the question has meningococcemia; he is in shock, and he is about to die. Acute Meningococcemia initially may mimic a viral*

76.c. Galactosemia	77.b. Meningococcemia

disease (nonspecific). Any organ can be affected by vasculitis and thromboembolic disease. Characteristic meningococcal rash (black central arch and surrounding ring or erythema) often seen before more serious signs develop. If fulminant, rapid progression: septic shock, disseminated intravascular coagulation, acidosis, adrenal hemorrhage, renal and heart failure may occur. Due to hemorrhage and necrosis into adrenal gland, the child may suffer from Waterhouse Freidrichsen syndrome. The ABCs of airway, breathing, and circulation should always take precedence over diagnostic studies. N meningitides can present as meningococcemia with purpura and shock; in some cases patients will also have meningitis. The LP should be deferred, however, until he is clinically stable. Intravenous fluids to support his cardiovascular status and antibiotics should be administered immediately.

78. A female child has recently learned to speak 2-3 word sentence; to dress and undress herself with supervision; and to understand that she is a girl. These skills are mastered between the ages of:

a. 1 & 2 years b. 2 & 3 years
c. 3 & 4 years d. 4 & 5 years

Milestones achieved by this child:

- *Speak 2-3 word sentence: by 24 months*
- *Dress and undress herself with supervision: by 36 months (helping to undress begins at 24 months, helps in dressing i.e. unbuttons clothing and puts on shoes); dresses and undresses without supervision by 60 months)*
- *Understand that she is a girl: by 36 months*

*(**Source:** Nelson's textbook of pediatrics, 20th edition, page 75)*

79. All of the following infection belongs to TORCH infection, except:

a. CMV b. Syphilis
c. Varicella d. Roseola infantum

Transplacental Intrauterine Infections (TORCH): Most TORCH infections are acquired in first or second trimester. Most infants have IUGR. It consists of the following infections:

1. *Toxoplasmosis*
2. *Other (syphilis, varicella, HIV, and parvovirus B19)*
3. *Rubella*
4. *Cytomegalovirus (CMV)*
5. *Herpes*

80. A 12 years old boy presented to your ER with 2 episodes of GTCS. He had one episode in ER. What will you do?

a. Give diazepam b. Load phenytoin
c. Do CT scan d. Both b & c

- *Status epilepticus should be managed with diazepam IV, IM or rectally first.*

81. Average birth weight of baby below which the term low birth weight is used:

a. 1500 g b. 2000 g
c. 2500 g d. 3000 g

82. A 6-year-old child presented with multiple fractures seen in various stages of healing. The most probable diagnosis in this case is:

a. Scurvy
b. Rickets
c. Battered baby syndrome
d. Sickle cell disease

83. All of the following are components of APGAR score, except:

a. Heart rate b. Muscle tone
c. Respiratory rate d. Reflex irritability

84. Father to son inheritance is never seen in case of:

a. Autosomal dominant inheritance
b. Autosomal recessive inheritance
c. X- linked recessive inheritance
d. Multifactorial inheritance

- *Father to son inheritance is not seen in X-linked (recessive & dominant as well) and mitochondrial inheritance disorders.*

Gynecology and obstetrics

85. If a pregnant lady comes to you in labor with term gestation of 39 weeks and lie is found to be transverse on pelvic examination and USG too. What would you do?

a. Emergency LSCS
b. External cephalic version
c. Internal cephalic version
d. Wait for spontaneous version

- *Provided there is good amount of liquor amnii and there is no contraindication, external cephalic version should be tried in all cases of transverse lie beyond 35 weeks of gestation.*

*(**Reference:** D.C. Dutta's textbook of Obstetrics, 7th edition, page 395 & 396)*

PART-19

86. Most important cause of PPH is:
a. Retained placenta
b. Atonicity
c. Trauma
d. Bleeding disorder

87. Vesicovaginal fistula is the commonest variety of genitourinary fistula. What is the most common cause of vesicovaginal fistula is?
a. UTI
b. Surgeries like abdominal hysterectomy or anterior colporrhaphy
c. Obstructed labor
d. TB bladder

☞ *In developing countries, the commonest cause for VVF is obstetrical and constitutes about 80-90% of cases. It may be either ischemic (obstructed labor) or traumatic (instrumental vaginal delivery). Gynecological causes like surgeries, trauma, malignancy, radiation and infection are more common than obstetrical cause in developed countries; as obstructed labor takes around 3-5 days to create VVF and instrumental delivery is done even by lots of untrained medical personals.*
*(**Reference:** D.C. Dutta's textbook of Gynecology, 5th edition, page 402)*

88. Drug of choice in eclampsia is:
a. Diazepam b. Valproic acid
c. $MgSO_4$ d. Phenytoin

89. A woman with 11 week of amenorrhea is sent for USG, it shows snowstorm appearance. Possible reason for the above mentioned finding is:
a. H. mole
b. Twin pregnancy
c. Uterine fibroid
d. Asherman's syndrome

90. Dual protection is given by which of the following contraceptive method?
a. Condom
b. Combined oral pills
c. IUCD
d. Rhythm method

ANSWERS

76.c.	Galactosemia	77.b.	Meningococcemia	78.b.	2 & 3 years
79.d.	Roseola infantum	80.a.	Give diazepam	81.c.	2500 g
82.c.	Battered baby syndrome	83.c.	Respiratory rate	84.c.	X- linked recessive inheritance
85.b.	External cephalic version	86.b.	Atonicity	87.c.	Obstructed labor
88.c.	$MgSO_4$	89.a.	H. mole	90.a.	Condom

91. Ayer's spatula is used for
a. Taking specimen for pap smear
b. Applying vaginal pessary
c. Transferring the sample to lab from remote sites
d. Inoculation of stain

92. Within how much time period, emergency contraceptive pill should be taken?
a. 72 hours b. 48 hours
c. 50 hours d. 62 hours

93. A 31-years-old female patient presents to gynecology OPD with complains of infertility. You decided to send her to hysterosalpingography. What is the best time period during a menstrual period you should send the patient for HSG?
a. 6-10 days b. 17-21 days
c. 20-26 days d. 10-16 days

☞ *HSG is done between day 6 and day 10 of the menstrual cycle. (Reference: D.C. Dutta's textbook of Gynecology, 5th edition, page 560)*

94. A 47 years old female is suspected to have postmenopausal bleeding. Which of the investigation finding is true?
a. Saline infusion sonography is very sensitive for diagnosing uterine polyps
b. Endometrial thickness > 12 mm is strongly indicative of hyperplasia
c. Hysteroscopy is better for evaluation of endometrial lesion and to take biopsy
d. All of the above

95. Which of the following is not true about normal puerperium?
a. Women loses body weight
b. Diuresis occurs from 2nd day
c. Progressive diminution of the uterus size
d. Red lochia continues till 8th week after delivery

96. Which of the following is the most dangerous type of placenta praevia?
a. Type III anterior b. Type II posterior
c. Type II anterior d. Type IV

97. The best predictor of ovulation is:
a. Estrogen peak
b. Follicle stimulating hormone (FSH) surge

c. Onset of the LH surge
d. Preovulatory rise in progesterone

Prediction of ovulation is possible by detection of prevulatory LH surge whereas ovulation has occurred can be confirmed by estimating mid luteal plasma progesterone level i.e., 5-8 days after ovulation. A minimum of 6.5 ng/ml is taken to indicate ovulation.

98. A 35-year-old female presents to gynecological OPD with complain of cyclical pain, dyspareunia and infertility. The best investigation to establish the diagnosis is:

a. Aspirate from the pouch of douglas
b. TVS
c. Diagnostic laparoscopy
d. Hormonal study

Clinical features of infertility, dyspareunia, and cyclical pain (i.e., dysmenorrhea) are highly suggestive of endometriosis. If in the same scenario, next or first investigation was asked answer would have been TVS.

TVS is the mainstay for evaluating symptoms associated with endometriosis. It is accurate in detecting endometriosis and aids exclusion of other causes of pain. Endometriosis can be TVS with adequate sensitivity in most settings, if they are 20 mm in diameter or greater). Since TVS is non-invasive wherever a patient comes with such symptoms, it is the first investigation done. However, IOC is always laparoscopy.

Orthopedics

99. Which of the following is used as graft most commonly?

a. Iliac crest b. Fibula
c. Radius d. Humerus

100. Earliest sign of acute osteomyelitis on X-ray is:

a. Periosteal new bone formation
b. Soft tissue changes
c. Sequestrum of bone seen clearly
d. Lytic changes

Plain X-ray features of acute osteomyelitis:

a. Early: *No changes in first 24 hours*
- *No change in bone*
- *Displacement of fat planes*
- *Soft tissue swelling*
- *Loss of soft tissue planes after 24 hours is the first radiological feature*

b. 2nd week:
- *Metaphyseal mottling (patchy rarefaction of metaphysis)*
- *Periosteal reaction (faint cortical outline due to new bone, it is the first bony change seen in x-ray at around 7-10 days)*

c. Late: *osteoporosis of surrounding bone*

101. What is the treatment of giant cell tumor?

a. Resection of tumor
b. Chemotherapy
c. Radiotherapy
d. Curettage with bone graft

En-bloc excision and reconstruction is the surgical method of choice. Only curettage leave away some cells in the cavity.

102. Which is the cause of claw hand?

a. Injury to radial nerve
b. Injury to median nerve
c. Injury to ulnar nerve
d. Paralysis of intrinsic muscles

Injury to both median and ulnar nerve produce classical claw hand but injury to ulnar nerve produce ulnar claw hand or claw like hand only.

Loss of intrinsic muscle (primarily lumbrical muscles) function due to ulnar nerve and median nerve *injury result in loss of flexion at MCP joints and extension of IP joints of the fingers.*

In a bid to bring about the flexion of MP joints, the long flexors (FDS and FDP) overact pulling the IP joints and wrist into more flexion.

The extensors can't extend the IP joint without stabilization of the MP joint in neutral or slightly flexed position which is brought about by intrinsic.

This compensatory overreaction of the long finger extensors to bring about lost extension of IP joints results in hyperextension of MCP joints and the classical deformity of claw hand.

103. In X-ray of skull, multiple punched out lesion is seen. What may be best investigation in above condition to reach to a proper diagnosis?

a. Electrophoresis
b. Bence Jones proteins
c. TommHorsfall protein
d. D-dimer

This is a case of multiple myeloma. Serum electrophoresis will show abnormal spike (M-band) in the region of gamma globulin (Myeloma spike) in 90% cases.

106.a. Acute otitis media	107.b. Rhinosporidiosis	108.b. Thyroglossal cyst

104. A 10-year-old child presented with pain in right hip along with swelling. There is history of fever since last 15 days and waking up in night due to pain. What is your diagnosis?

a. Perthe's disease b. Avascular necrosis
c. TB hip d. Osteomyelitis

The diagnostic calendar: age of onset can be a guide to probable diagnosis	
Age of onset	*Probable diagnosis*
0 (birth)	*Developmental dysplasia*
0 – 5	*Infections*
5 – 10	*Perthes' disease*
10 – 20	*Slipped capital femoral epiphysis*
Adults	*Arthritis*

Furthermore, pain and swelling of hip with restriction of abduction and internal rotation

- *In age group 4-8 years age: Perthe's disease*
- *In 11-20 years age: Slipped capital femoral epiphysis in which Trethowan's sign is seen.*

105. A boy while playing football twisted his leg and fell on the ground. He again started playing football after a couple of minutes. Next day morning, he had swelling and pain in his knee joint. What could be the cause?

a. Medial meniscal tear
b. Lateral meniscal tear
c. Medial collateral injury
d. Latera collateral injury

☞ *A history of twisting injury to the semi-flexed knee and swelling appears immediately before the game ended indicates hemarthrosis and it is indicating anterior cruciate ligament injury. Swelling appearing next day due to effusion is classical to the medial menisal injury. But one must rule out O'Donoghue triad (medial collateral ligament, medial meniscus and anterior cruciate ligament injury together).*

ANSWERS

91.a. Takingspecimen for pap smear	92.a. 72 hours	93.a. 6-10 days
94.d. All of the above	95.d. Red lochia continues ...	96.b. Type II posterior
97.c. Onset of the LH surge	98.c. Diagnostic laparoscopy	99.a. Iliac crest
100.b. Soft tissue changes	101.a. Resection of tumor	102.d. Paralysis of intrinsic muscles
103.a. Electrophoresis	104.a. Perthe's disease	105.a. Medial meniscal tear

ENT

106. A child of 5 years age presents with the history of earache. He is also suffering from common cold. On otoscopy, the tympanic membrane is bulged and tense. Diagnosis is:

a. Acute otitis media
b. Furuncle
c. Otitis media with effusion
d. COM

107. 'Bleeding polypus' is known as:

a. Juvenile angiofibroma
b. Rhinosporidiosis
c. Nasal polyp
d. Maggots in nose

☞ *Rhinosporidiosis are lesions that are polypoid and pappilomatous friable mass which bleed easily on touch. They are strawberry (pink to purple) colored and studded with white dots representing the spongia.*

☞ *Maggot lesions are not polypoid; juvenile angiofibroma are mass rather than polyp which are notorious to bleed; nasal polyps are not so commonly bleeding lesions.*

108. A mass is present in the throat region and it moves with deglutination. On examination, it is present above the hyoid bone. What is the diagnosis?

a. Plunging ranula
b. Thyroglossal cyst
c. Mucus retention cyst
d. Tonsillar abscess

109. A 40 year old man with the history of chronic smoking came with complain of hoarseness of voice and weight loss. What is the diagnosis?

a. Carcinoma of pharynx
b. Carcinoma of larynx
c. Epiglottitis
d. Peritonsillar abscess

110. What is the treatment modality of aticoantral type of CSOM?

a. Cortical mastoidectomy
b. Radical mastoidectomy
c. Modified radical mastoidectomy
d. Course of broad spectrum antibiotic

Chronic suppurative otitis media (CSOM)

108.b. Thyroglossal cyst	109.b. Carcinoma of larynx	110.c. Modified radical ...	111.a. Acute congestive glaucoma

111.a. Acute congestive glaucoma	115.a. Cornea	116.a. 1-3 years	117.d. Tropicamide
	118.a. Sodium thiopental	119.a. Ketamine	120.d. All of the above

- *Perforation of pars flaccida leads to attic perforation which is considered dangerous (usually associated with cholesteatoma) and should be managed with modified radical mastoidectomy.*
- *Treatment of choice for AA type of CSOM is **surgery by MRM**.*
- *Treatment of choice for TT type of CSOM is mainly conservative in the form of aural toileting & systemic antibiotics and once the ear is dry, myringoplasty can be done.*

Ophthalmology

111. A 40 years lady has been using +2 D lens for since childhood. She suddenly develops blurring of vision, headache and vomiting. What is the cause?

a. Acute congestive glaucoma
b. Corneal ulcer
c. Open angle glaucoma
d. Strabismus

112. A man after having injury of right eye developed lid swelling, pain and conjunctival congestion of right eye. What may be the cause?

a. Endophthalmitis
b. Orbital cellulitis
c. Vernal conjunctivitis
d. Scleritis

113. What is true about color blindness?

a. More common in male
b. More common in female
c. Autosomal recessive
d. Associated with night blindness

114. Commonest cause of blindness in Nepal

a. Trachoma
b. Glaucoma
c. Age related cataract
d. Vitamin A deficiency

115. Maximum refraction of light occurs through:

a. Cornea b. Lens
c. Aqueous d. Vitreous

- *The power of anterior surface of cornea is 48 D which is 3/4th of the total refractive power of the eye i.e. 60 D. Hence, maximum refraction of light occurs through cornea.*

116. Retinoblastoma is common in age group of:

a. 1-3 years b. 3-5 years
c. 3-10 years d. 7-15 years

117. Cycloplegic action can be seen by all of the following drugs, except:

a. Atropine b. Homatropine
c. Cyclop d. Tropicamide

- *Tropicamide is used as mydriatric only.*

Anesthesia

118. Which of the following is a complete anesthetic agent?

a. Sodium thiopental b. Ketamine
c. Propofol d. Halothane

119. A hypertensive patient was going for cholecystectomy, which of the following anesthetic agent is contraindicated?

a. Ketamine
b. Halothane
c. Sodium thiopental
d. Propofol

Summary table for the use and contraindication of IV anesthetic

Disease /state	Contraindicated	Best to use/DOC
1. Asthmatics	Thiopentone	Ketamine, Sevofurance
2. Raised ICP	Ketamine	Propofol, thiopentone
3. Hypertension	Ketamine	Thiopentone
4. Hypotensive, shock	Thiopentone	Ketamine
5. ECT	-	Methohexitone
6. Malignant hypertension	-	Propofol
7. Children	-	Sevoflurane, ketamine
8. Psychiatric patient	Ketamine	Propofol, Thiopentone
9. Porphyria	Thiopentone	Ketamine, Propofol

120. Which of the following is the feature of anaphylaxis?

a. Hypotension and shortness of breath
b. Skin rash and shortness of breath
c. Skin rash and hypotension
d. All of the above

112.b. Orbital cellulitis	113.a. More common in male	114.c. Age related cataract
115.a. Cornea	116.a. 1-3 years	117.d. Tropicamide
118.a. Sodium thiopental	119.a. Ketamine	120.d. All of the above

123.b. 220 ml

Clinical features of anaphylaxis

- *Cutaneous findings— pruritus, erythema, urticaria, angioedema (rash also known as hives)*
- *Respiratory findings— dyspnea, respiratory distress, asphyxia*
- *Cardiovascular findings— hypotension, shock, arrhythmias*
- *GI findings—abdominal pain, nausea/vomiting, severe diarrhea*

ANSWERS

106.a. Acute otitis media	107.b. Rhinosporidiosis	108.b. Thyroglossal cyst
109.b. Carcinoma of larynx	110.c. Modified radical ...	111.a. Acute congestive glaucoma
112.b. Orbital cellulitis	113.a. More common in male	114.c. Age related cataract
115.a. Cornea	116.a. 1-3 years	117.d. Tropicamide
118.a. Sodium thiopental	119.a. Ketamine	120.d. All of the above

121. A child was in OT with laryngeal mask airway. What does it prevent?

a. Aspiration pneumonia
b. Use of muscle relaxant
c. Infection
d. Laryngospasm

LMA is indicates in following conditions

1. *As an alternative to intubation, where difficult intonation is anticipated*
2. *Securing airway in emergency where intubation and bag & mask ventialttion is not possible.*
3. *As an elective method for minor surgeries where intubation can be avoided.*

☞ *It is easy to insert (even paramedical staff can insert) and does not require any laryngoscope and muscle relaxants.*

☞ *It does not prevent aspiration, so should not be used for full patients.*

☞ *It can cause laryngospasm if displaces anteriorly.*

Reference: *Short text book of anesthesia by Ajay Yadav, 5th edition, page 42*

122. A patient was to be operated in a couple days. You, as an anesthesiologist were sent for pre-anesthetic checkup. Why is this done?

a. To take consent
b. To explain procedure to the patient
c. To decide plan for anesthesia
d. All of the above

123. A 10 kg child was on 8 hours fasting. Calculate the intraoperative fluid required per hour.

a. 320 ml
b. 220 ml
c. 160 ml
d. 120 ml

☞ *Calculation of intraoperative fluid: maintenance fluid + fasting deficit (maintenance fluid × hours of feeding; 50% given in 1st hour, 25% in 2nd hour and last 25% in 3rd hour) + 3rd space loss (vary from 2-6 ml/kg) + loses*

= 10 × 4 (maintenance fluid per hour) + (10 × 4 × 8)/2 (fasting deficit in first hour) + 2 × 10 (3rd space loss) = 220 ml /hour

124. Spinal anesthesia is given at the level of

a. L_1-L_2
b. L_2-L_3
c. L_3-L_4
d. L_4-L_5

☞ *Level of spine in adults for spinal anesthesia: **L3-L4 space** (or L4-L5 space or even L2-L3 space); spinal cord extends from medulla oblongata to lower border of L1 in adults.*

☞ *Level of spine in children for spinal anesthesia: **L4-L5 space**; spinal cord extends from medulla oblongata to lower border of L3 in neonates and infants, adult level is achieved by 2 years of age.*

125. In a paraplegic patient, which of the following anesthetic agent is to be avoided?

a. Depolarizing agent
b. Ketamine
c. Thiopental
d. Sevoflurane

☞ *Contraindication to use of succinylcholine [Depolarizing (non - competitive) neuromuscular blocker]: **Hyperkalemia (massive soft tissue injury), head injury (raised ICP)**, Newborn and infants, Glaucoma & eye injuries (Raised IOP), Renal failure, Tetanus, GBS, Shock, Metabolic acidosis, **Upto**; 3 months after trauma, **6 months after hemiplegia** and 1 year after burn.*

Psychiatry

126. A man not involved in any political party has increased activity, shouts loud and says he can change this country within 2 days. What may be the problem with this guy?

a. Delirium
b. Schizophrenia
c. Mania
d. OCD

127. Hallucination is defect of:

a. Perception
b. Thought
c. Awareness
d. Communication

121.b. Use of muscle relaxant | 122.d. All of the above | 125.a. Depolarizing agent | 126.c. Mania | 127.a. Perception

Dermatology

128. How would you treat kerion with inflammation?

a. Topical antifungal
b. Topical antibiotic with anti-inflammatory agent
c. Oral antibiotic with anti-inflammatory agent
d. Antifungal shampoo with anti-inflammatory agent

129. A newly married girl presents to you with painfulgenital ulcers. The probable diagnosis is:

a. Syphilis b. Chancroids
c. Gonorrhea d. Donovanosis

130. How will you treat a case of acne with papules, pustules, comedones and nodules?

a. Azithromycin b. Tetracycline
c. Doxycycline d. Isotretinoin

☞ *Isotretinoin is used in severe & recalcitrant nodular acne unresponsive to conventional therapy.*

ANSWERS

121.b. Use of muscle relaxant	122.d. All of the above	123.b. 220 ml
124.c. L_3-L_4	125.a. Depolarizing agent	126.c. Mania
127.a. Perception	128.d. Antifungal shampoo ...	129.b. Chancroids
130.d. Isotretinoin		

Comprehensive structured Questions

A. A dysmorphic floppy baby presents to your OPD with poor head control and poor sucking & swallowing since birth. On examination you find that it is associated ocular ptosis and weak muscles on repeated use.

131. What could be the most probable cause?

a. Down's syndrome
b. TORCH infection
c. Myasthenia gravis
d. Duchene muscular dystrophy

132. Which of the following factor may play an important role in this disease?

a. Genetic
b. Chromosomal
c. Environmental
d. Autoimmune

133. What type of problem is common in such patient?

a. Microcephaly
b. Congenital heart disease
c. Macrognathia
d. Early feeding difficulties

134. Which is the best method of investigating this disease?

a. Karyotyping
b. Immunoelectrophoresis
c. EMG electromyographic
d. Gene assay

135. What will be the outcome of this disease?

a. Will never improve
b. Mild form undergoes spontaneous remission
c. Very bad prognosis
d. Can live normal life later without any treatment

☞ *Myasthenia gravis is Immune-mediated neuronal blockade where motor end plate is less responsive due to decreased number of available acetylcholine receptors secondary to circulating receptor binding antibodies. It is generally nonhereditary.*

Clinical presentation

☞ *Ptosis and extraocular muscle weakness is the earliest and most consistent finding.*
☞ *Dysphagia and facial weakness, and early infant feeding difficulties*
☞ *Poor head control*
☞ *Limb-girdle weakness and in distal muscles of hands*
☞ *Rapid muscle fatigue, especially late in the day*
☞ *May have respiratory muscle involvement*

Diagnosis–

☞ *EMG more diagnostic than muscle biopsy—decremental response to repetitive nerve stimulation, reversed after giving cholinesterase inhibitor (edrophonium) → improvement within seconds*

Treatment

☞ *Mild—many need no medication*
☞ *Cholinesterase-inhibiting drugs—either neostigmine bromide PO or pyridostigmine*
☞ *Severe—long-term prednisone; if no response, intravenous immunoglobulin (Ig), then plasmapheresis*
☞ *Thymectomy—most effective if patient has high anti-ACh titers and symptoms for <2 years*

131.c. Myasthenia gravis	132.d. Autoimmune	133.d. Early feeding difficulties
134.c. EMG	135.b. Mild form undergoes	

Complications

- *Do not tolerate neuromuscular blockade and aminoglycosides potentiate*
- ***Prognosis** varies, with some children undergoing spontaneous remission, while in others the disease persists into adulthood.*

ANSWERS

131.c. Myasthenia gravis	132.d. Autoimmune	133.d. Early feeding difficulties
134.c. EMG	135.b. Mild form undergoes	

B. A 40 years old multigravida present with something coming down per vaginum. She also complaints that she can't hold the urine and she also gives history of dysuria and frequency. On palpating the abdomen just above the symphysis pubis it is soft fluid filled mass with mild tenderness.

136. What is the most probable diagnosis?

a. Uterovaginal prolapse
b. Uterovaginal prolapse with early pregnancy
c. Ovarian cyst with uterovaginal prolapse
d. Fibroid

137. In this patient, which of the following history would you like to extract?

a. History of recent sexual intercourse
b. Chronic constipation
c. Morning sickness
d. Intermenstrual bleeding

Aggravating factors for uterine prolapse

- *Postmenopausal atrophy*
- *Poor collagen tissue repair with age*
- *Increased intra-abdominal pressure as in chronic lung disease and constipation*
- *Occupation (weight lifting)*
- *Asthenia and undernutrition*
- *Obesity*
- *Increased weight of the uterus as in fibroid or myohyperplasia*

138. What investigation will you sent for?

a. USG
b. UPT
c. CT
d. β-hCG

139. To which specialist will you prefer this case?

a. Gynaecologist
b. Uro-gynaecologist
c. Urologist
d. Obstetrician

140. What will be the immediate management of this patient?

a. Catheterization
b. TAH
c. TAH with BSO
d. Ring pessary

ANSWERS

136.c. Ovarian cyst with	137.b. Chronic constipation	138.a. USG
139.a. Gynaecologist	140.a. Catheterization	

C. A 23 years old female from Birgunj came to your OPD with palpitation, diarrhea, weight loss and exophthalmos.

141. What is the diagnosis?

a. Hypothyroidism
b. Hyperthyroidism
c. Hypertension
d. Diabetes mellitus

142. A condition you would expect in above condition:

a. Hyperreflexia
b. Areflexia
c. Hoarse voice
d. Menorrhagia

143. Which of the following condition will not lead to this condition?

a. Grave's disease
b. Hashimoto's thyroiditis
c. Plummer's disease
d. Toxic thyroid adenoma

Causes of hyperthyroidism

1. *Graves' disease (diffuse toxic goiter) is the most common cause—80% of all cases*
2. *Plummer's disease (multinodular toxic goiter)—15% of all cases*
3. *Toxic thyroid adenoma (single nodule)—2% of all cases*
4. *Hashimoto's thyroiditis and subacute (granulomatous) thyroiditis (both can cause transient hyperthyroidism)*
5. *Other causes (rare)*
   a. *Postpartum thyroiditis (transient hyperthyroidism)*
   b. *Iodine-induced hyperthyroidism*
   c. *Excessive doses of levothyroxine (e.g., iatrogenic by health care provider or surreptitious self-administration)*

141.b. Hyperthyroidism	142.a. Hyperreflexia	143.b. Hashimoto's thyroiditis

Causes of hypothyroidism

1. *Primary hypothyroidism is the failure of the thyroid to produce sufficient thyroid hormone. This accounts for about 95% of all cases.*
   a. *Hashimoto's disease (chronic thyroiditis)—most common cause of primary hypothyroidism*
   b. *Iatrogenic—second most common cause of primary hypothyroidism; results from prior treatments of hyperthyroidism, including:*
      - *Radioiodine therapy*
      - *Thyroidectomy*
      - *Medications (e.g., lithium)*
2. *Secondary hypothyroidism (due to pituitary disease; i.e., deficiency of TSH) and tertiary hypothyroidism (due to hypothalamic disease; i.e., deficiency of TRH) account for less than 5% of cases. Both are associated with a low free T4 and alow TSH level.*

144. What is the investigation of choice?

a. USG
b. FNAC
c. TFT
d. S. calcium

☞ *The first-line investigations are serum T3, T4 and TSH. If abnormal values are found, the tests should be repeated and the abnormality confirmed in view of the likely need for prolonged medical treatment or destructive therapy.*
(Reference: Davidson's Principles and Practice of Medicine, 22nd edition, page 740)

145. What is the immediate treatment of this condition?

a. Carbimazole
b. Thyroxin
c. Steroids
d. Propranolol

ANSWERS

141.b. Hyperthyroidism	142.a. Hyperreflexia	143.b. Hashimoto's thyroiditis
144.c. TFT	145.d. Propranolol	

D. The only son of a farmer presented to ER with the features of lacrimation, increased sweating and pinpoint pupil. He was diagnosed to be a case of OP poisoning.

146. What is the antidote of OP poisoning?

a. Atropine
b. Neostigmine
c. Naloxone
d. Malathion

☞ *Atropine is the specific antidote that counteracts the muscarinic effects of the poison. It is given as 3-5 ampules (1.8-3 mg) in adults and 0.05-0.1 mg/kg in children below 12 years, bolus IV every 5-10 minutes until atropinization is attained. Signs of atropinization (mid-dilated pupils, HR >80 bpm, Systolic BP >80 mm Hg, better air entry on auscultation, dry axilla & tongue and flushing of skin) are assessed every 15 minutes and the bolus dose is adjusted if not achieved.*

☞ *Now, after achieving atropinization, 20% of the total loading dose is administered every hour through an IV infusion in normal saline for 24-48 hours. Gradually, the dose is reduced by 1/4th of the previous days' dose and tapered off over 4-5 days.*

147. Mechanism of action of pralidoxime is?

a. Acetylcholineinhibitor
b. Cholinesterase inhibitor
c. Cholinesterase reactivator
d. Acts like acetylcholine

☞ *Pralidoxime (reactivates phosphorylated acetylcholinesterase and works on the nicotinic effects as well) is most likely to be effective if started very soon after poisoning, to prevent permanent binding of the organophosphate to cholinesterase. Administer 2 gm in 100 ml of NS (30 mg/kg) over 30 minutes and is followed by infusion of 1 gm every 4 hourly. Continue to give pralidoxime as long as there is any evidence of acetylcholine excess.*

148. Which of the following is not a side effect of atropine?

a. Tachycardia
b. Retention of urine
c. Hot skin
d. Hypotension

149. What is the dose for atropine challenge test?

a. 0.6 - 1.2 mg
b. 1.8 – 2.4 mg
c. 2.4- 3 mg
d. 5 mg

150. All are true about response to atropine challenge test, except:

a. It can differentiate between significant and insignificant OP poisoning
b. If sign and symptoms improve, history of vigorous vomiting after ingestion should be sought for

PART-19

146.a. Atropine	147.c. Cholinesterase reactivator	148.d. Hypotension
149.a. 0.6 - 1.2 mg	150.d. If it is positive....	

c. No response to this test is indication for active measures to achieve atropinization
d. If it is positive, there is no need for pralidoxime therapy

☞ *Atropine challenge test: It is done in those poisoned patients who have vomited immediately after the ingestion of poison or have little/no symptoms after suspected ingestion. Only 1-2 ampules (0.6-1.2mg) of atropine is given IV. Increase in heart rate >20-25 beats/min above baseline and flushing of skin suggest the patient doesn't have significant cholinergic poisoning and there is no need for further injection of atropine because poisoning is not significant to be worried for.*

ANSWERS

146.a. Atropine	147.c. Cholinesterase reactivator	148.d. Hypotension
149.a. 0.6 - 1.2 mg	150.d. If it is positive....	

E. A patient had a head injury and developed loss of consciousness for a very brief period and vomiting. Then, he was fine for 6 hours. Suddenly he deteriorated and falls unconscious again.

151. What is the probable diagnosis?
a. SDH
b. EDH
c. Cerebral contusion
d. SAH

152. CT scan finding of this patient will reveal:
a. Biconvex shaped hyerdense area
b. Crescent shaped hypodense area
c. Biconvex shaped hypodense area
d. Crescent shaped hyperdense area

☞ *On CT, extradural haematomas appear as a lentiform (lens shaped or biconvex) hyperdense lesion between skull and brain, constrained by the adherence of the dura to the skull. Mass effect may be evident, with compression of surrounding brain and midline shift. Areas of mixed density suggest active bleeding. A skull fracture will usually be evident.*

153. Now after deterioration, patient responds to pain, localizes pain and is confused. What is the GCS score?
a. 8
b. 10
c. 11
d. 12

154. What do you interpret this GCS score as?
a. Mild head injury
b. Moderate head injury
c. Severe head injury
d. Minor head injury

155. What is the management of this case?
a. Craniotomy and clot evacuation
b. Antiepileptic
c. Clipping, or wrapping the aneurysm
d. Wait and watch

Glasgow coma scale		
Best motor response	***Best verbal response***	***Best eye opening***
Obeys commands – 6	*Normal or oriented conversation – 5*	*Spontaneous – 4*
Localizes pain (brings hand up beyond chin with supra-orbital pain given) – 5	*Confused (some degree of confusion and disorientation) – 4*	*To speech – 3*
Withdrawal form pain (unable to lift hand past chin with supra-orbital pain but does pull away when nailbed is pinched– 4	*Inappropriate words (random words or articulatory speech, but no conversational exchange) – 3*	*To pain – 2*
Abnormal flexion (decorticate posturing) – 3	*Incomprehensible sounds (moaning but no words) – 2*	*No response – 1*
Extension to pain (decerebrate posturing)– 2	*No sound – 1*	
No motor response – 1	*Intubated patient – T*	

Interpretation:
15/15, no loss of consciousness but CT findings are positive: minor degree head injury
14-15/15 with LOC: mild head injury
9-13/15: moderate head injury
3-8/15: severe head injury

ANSWERS

151.b. EDH	152.a. Biconvex shaped...	153.c. 11
154.b. Moderate head injury	155.a. Craniotomy and ...	

F. A 35 years old man had an accident while riding a car. He hit his car with a truck and got dash board injury.

156. What is the most probable outcome of this injury?
a. Posterior hip dislocation
b. Anterior hip dislocatioan
c. Neck of femur fracture
d. Shaft of femur fracture

157. What will be the attitude of the limb?

a. External rotation, abduction and lengthening
b. Internal rotation, adduction and shortening
c. External rotation, adduction and shortening
d. Internal rotation, abduction and shortening

☞ *In posterior dislocation of hip the head of femur is forced out of the back of the acetabulum by force applied along the shaft of femur, while the hip is flexed or semiflexed. This type of injury commonly occurs in motor car accidents in which the occupant of the car is thrown forwards after a collision and strikes the front of his flexed knee (dash board injury). Another common cause is motorcycle crash. Patient presents with pain, swelling and deformity (internal rotation, adduction and flexion) after trauma. There is associated shortening of limb.*

158. Which nerve is more likely to get damaged?

a. Femoral
b. Sciatic
c. Common peroneal
d. Gluteal

☞ *One of the early complications of posterior hip dislocation is sciatic nerve injury (which lies behind posterior wall). One must check sciatic nerve before reduction, if diagnosed after reduction: explore to ensure it is not trapped by reduction maneuver.*

159. You are asked about the further management plan by your consultant. What will you suggest?

a. Open reduction and fixation
b. Closed reduction under analgesia/ sedation
c. Closed reduction followed by traction
d. ORIF with plates

160. Not a cause of avascular necrosis of neck of femur:

a. Caisson's disease
b. Calcium deficiency
c. Sickle cell anemia
d. Chronic steroid use

Causes of avascular necrosis of femur

☞ ***Traumatic:*** *dislocation of hip (20% of all) or fracture of neck of femur*

☞ ***Non-traumatic:*** *chronic steroid use (35% of all non-traumatic causes), excessive alcohol use, Gaucher's disease (an inherited metabolic disorder in which harmful quantities of a fatty substance accumulate in the organs), sickle cell anemia, pancreatitis, HIV infection, radiotherapy or chemotherapy, autoimmune diseases, Decompression sickness (Caisson's disease: a condition that occurs when the body is subjected to a sudden reduction in surrounding pressure causing the formation of gas bubbles in the blood), rarely use of bisphosphonates (used for the treatment of osteoporosis).*

☞ ***Idiopathic***

ANSWERS

156.a. Posterior hip dislocation	157.b. Internal rotation....	158.b. Sciatic
159.c. Closed reduction ...	160.b. Calcium deficiency	

G. A 24-year-old lady accidently poured the jar full of hot water over her upper arms. According to Wallace's rule, there was 13% burn of total body surface area.

161. Which of the following is an absolutely painless burn?

a. Partial thickness superficial
b. Partial thickness deep
c. Full thickness
d. All are painful

162. All of the following patients are admitted in the burn unit, except:

a. Suspected airway or inhalational injury
b. Prolonged trapping in a closed burning room
c. Burn with circumferential eschar formation
d. Patient with nitric acid burn

The criteria for acute admission to a burns unit

☞ *Suspected airway or inhalational injury*
☞ *Any burn likely to require fluid resuscitation*
☞ *Any burn likely to require surgery*
☞ *Patients with burns of any significance to the hands, face, feet or perineum*
☞ *Patients whose psychiatric or social background makes it inadvisable to send them home*
☞ *Any suspicion of non-accidental injury*
☞ *Any burn in a patient at the extremes of age*
☞ *Any burn with associated potentially serious sequelae, including high-tension electrical burns and concentrated hydrofluoric acid burns*

Recognition of the potentially burned airway

- *A history of being trapped in the presence of smoke or hot gases*
- *Burns on the palate or nasal mucosa, or loss of all the hairs in the nose*
- *Deep burns around the mouth and neck*

(Reference: Bailey & Love's Short Practice of Surgery, 26th edition, page 388)

163. Which of the following is a warning sign of inhalational burn injury?

a. Burn around face and neck
b. Stridor
c. Change of voice
d. All

164. Crystalloids are preferred over colloids for first 24 hours in such case because of:

a. Amount of fluid required to prevent circulatory shock is high and such amount of colloid is almost unmanageable at such short period
b. Crystalloids are easily available and easy to resuscitate with
c. Colloids will lead to further fluid loss in that period and enhance circulatory collapse
d. All

- *The inflammatory factors like cytokines such as TNF-α alter the permeability of blood vessels such that intravascular fluid escapes. The increase in permeability is such that large protein molecules can also now escape with ease.* ***The damaged collagen and these extravagated proteins (albumin or other colloids) increase the oncotic pressure within the burned tissue, further increasing the flow of water from the intravascular to the extravascular space.*** *The overall effect of these changes is to produce a net flow of water, solutes and proteins from the intravascular to the extravascular space. This flow occurs over the first 36 hours after the injury, but does not include red blood cells. In a small burn, this reaction is small and localized but, as the burn size approaches 10–15 per cent of total body surface area (TBSA), the loss of intravascular fluid can cause a level of circulatory shock. This is why such importance is attached to measuring the TBSA involved in any burn. It dictates the size of inflammatory reaction and therefore the amount of fluid needed to control shock.*

(Reference: Bailey & Love's Short Practice of Surgery, 26th edition, page 392)

165. Which of the following is not a further step you would like to take in this case?

a. Assess the distal pulse
b. Oral antibiotic for a week
c. Burn dressing with silver sulfadiazine
d. IV fluids

Fluids for resuscitation:

- *In children with burns over 10 per cent TBSA and adults with burns over 15 per cent TBSA, consider the need for intravenous fluid resuscitation.*
- *If oral fluids are to be used, salt must be added.*
- *The key is to monitor urine output*

ANSWERS

161.c. Full thickness	162.d. Patient with nitric acid burn	163.d. All
164.c. Colloids will lead ...	165.d. IV fluids	

H. Menstrual period of a lady was delayed by 1 week of her normal time and she is presenting the ER with acute abdominal pain. Her BP is 90/60 mmHg & PR is 126 bpm and she is having fainting attack.

166. In this case, what could be the most probable the diagnosis?

a. Septic shock
b. Ruptured ectopic pregnancy
c. Septic abortion
d. DUB

- *The classic history of acute abdominal catastrophe with fainting attack and collapse associated with features of intra-abdominal hemorrhage in a woman of child bearing age points to a certain diagnosis of acute ectopic. The classic triad of symptoms of acute (ruptured) ectopic pregnancy are abdominal pain (100%), preceded by amenorrhea (75%) and lastly, appearance of vaginal bleeding (70%). Amenorrhea of short period (6-8 weeks) is usually present.*

Reference: *DC Dutta's Textbook of Obstetrics, 7th edition, page 180, 182*

167. Which of the following is most likely finding in PV examination?

a. OS partially open with fleshy mass, no tenderness
b. OS closed with cervical motion tenderness
c. OS open with dribbling of blood
d. PV examination must not be done

Cervical motion tenderness seen only in:

- *PID*
- *Ectopic pregnancy*

168. Which of the followings are the risk factors for this case?

a. History of PID
b. IUD use
c. Previous induced abortion
d. All of above

Risk factors of ectopic pregnancy

- *History of PID*
- *History of tubal ligation*
- *Contraception failure*
- *Previous ectopic pregnancy*
- *Tubal reconstructive surgery*
- *History of infertility*
- *ART particularly if the tubes are patent but damaged*
- *IUD use*
- *Previous induced abortion*
- *Tubal endometriosis*

169. What is the most common site of this disease?

a. Abdominal
b. Ovarian
c. Pouch of Douglas
d. Tubal

170. How will you manage this case in emergency room?

a. Open IV line, fluids & catheterization
b. IV fluids and antibiotics and then USG after stabilization
c. Laparotomy
d. Both 'a' and 'c' together

The principle in the management of acute ectopic is resuscitation and laparotomy and not resuscitation followed by laparotomy.

- ***Anti-shock treatment:*** *Anti-shock measures are to be taken energetically (Ringer's solution i.e. crystalloid is started) with simultaneous preparation for urgent laparotomy.*
- ***Laparotomy:*** *Even if blood is not available, laparotomy is to be done desperately. Indications of Laparotomy are—(i) Patient hemodynamically unstable (ii) Laparoscopy contraindicated (iii) Evidence of rupture. The principle in laparotomy is 'quick in quick out'.*

ANSWERS

166.b. Ruptured ectopic pregnancy	167.b. OS closed with cervical ...	168.d. All of above
169.d. Tubal	170.d. Both 'a' and 'c' together	

I. A 10-year-old boy presents with oliguria, cola-colored urine and edema of his lower extremities. On physical examination, the patient has high blood pressure. He does not appear to be in any distress. His lungs are clear to auscultation, and his heart has a regular rate and rhythm without any murmurs, gallops, or rubs.

171. What is the likely diagnosis?

a. Acute glomerulonephritis
b. Nephrotic syndrome
c. Polycystic renal disease
d. IgA nephropathy

Diagnostic clues for AGN from the history itself

- *Mostly 5–12 years old (corresponds with typical age for strep throat)*
- *1–2 weeks after strep pharyngitis or 3–6 weeks after skin infection (impetigo)*
- *Ranges from asymptomatic microscopic hematuria (coca-cola colored urine) to acute renal failure*
- *Edema, hypertension, hematuria is the classic triad of symptoms*

172. Which is probably responsible for the same?

a. E coli
b. β-hemolytic streptococci
c. Staph aureus
d. Hereditary

- *Acute glomerulonephritis follows infection with nephrogenic strains of group A beta-hemolytic streptococci of the throat (mostly in cold weather) or skin (in warm weather). Hence it is called as acute post-streptococcal glomerulonephritis (PSGN).*

173. Initial investigation tool for the above case would be:

a. Urine and ASO titer
b. C3 level
c. Renal biopsy
d. CBC and throat culture

Diagnostic tools for PSGN

- ***Urinalysis: RBCs, RBC casts, protein 1–2 +, polymorphonuclear cells***
- *Mild normochromic anemia (hemodilution and low-grade hemolysis)*
- ***Low C3 (returns to normal in 6–8 weeks)***
- ***Need positive throat culture or increasing antibody titer to streptococcal antigens; best single test is the anti-DNase antigen***

☞ *Consider biopsy only in presence of acute renal failure, nephrotic syndrome, absence of streptococcal or normal complement; or if present >2 months after onset*

174. How is the prognosis of this disease?

a. Good
b. Bad
c. Not predictable
d. Worst

175. One of the following is not a complication of this case:

a. Hypertension
b. Seizures
c. Congestive heart failure
d. Thromboembolism

Complications of PSGN

☞ *Hypertension*
☞ *Acute renal failure*
☞ *Congestive heart failure*
☞ *Electrolyte abnormalities*
☞ *Acidosis*
☞ *Seizures*
☞ *Uremia*

ANSWERS

171.a. Acute glomerulonephritis	172.b. β-hemolytic streptococci	173.a. Urine and ASO titer
174.a. Good	175.d. Thromboembolism	

J. A young boy came with the complaints of pruritus, yellowish discoloration of skin and pain on right hypochondriac region which shifts towards right scapula.

176. What is the probable diagnosis?

a. Hepatitis B
b. Obstructive jaundice
c. Hemolytic jaundice
d. Alcoholic hepatitis

177. You sent for LFT and other investigations. Which enzyme do you expect to increases in this case?

a. SGOT
b. SGPT
c. Conjugated bilirubin
d. Unconjugated bilirubin

178. If u suspect for Hepatitis E virus, which marker would you send for investigation?

a. Anti- HBsAg
b. HBeAg
c. Anti-HBeAg
d. IgM Ab to HEV

179. Mortality rate of HEV infection in pregnancy is:

a. Equal to that of Hepatitis A
b. Similar to that of Hepatitis B
c. Similar to that of Hepatitis C
d. Very high than all others

☞ *The clinical presentation and management of hepatitisE are similar to that of hepatitis A. Disease is spread via the feco-oral route; in most cases, it presents as aself-limiting acute hepatitis and does not usually causechronic liver disease, although some cases have beendescribed, usually in immunocompromised patients. Hepatitis E differs from hepatitis A in that infectionduring pregnancy is associated with the development ofacute liver failure, which has a high mortality. In acuteinfection, IgM antibodies to HEV are positive.*

***(Reference:** Davidson's Principle and Practice of Medicine 22nd edition, page 955)*

180. What is the treatment modality for HEV infection?

a. Ribavirin
b. Alfa-interferon
c. Supportive
d. Active immunization

Treatment options for Hepatitis:

1. *Active (vaccine) and passive (immunoglobulin) immunization are available for both hepatitis A and B. It is the standard of care for infants and health care workers to be vaccinated for HBV*
2. *Travelers often receive vaccinations for HAV. Passive immunization can be given for people who are exposed to the virus.*
3. *Treatment for hepatitis A and E is supportive.*
4. *Chronic HBV—Treat with interferon (IFN)-a. Alternatively, treat with lamivudine (nucleoside analogue).*
5. *Chronic HCV—Treat with IFN-α and ribavirin.*
6. *Consider liver transplantation in advanced disease, although recurrence can occur after transplantation.*

ANSWERS

176.b. Obstructive jaundice	177.c. Conjugated bilirubin	178.d. IgM Ab to HEV
179.d. Very high than all others	180.c. Supportive	

Mangsir 2073

NMCLE – MANGSIR 2073

Anaesthesia:

1. **Cricoid pressure is applied during intubation for:**
   a. visualization during laryngoscopy.
   b. Ease of intubation
   c. Prevention of aspiration
   d. Prevention of trauma.

   ☞ *Cricoid pressure is applied during rapid sequence induction to prevent regurgitation and assist in visualization.*

2. **Post –anaesthetic shivering is treated by**
   a. Pethidine b. Paracetamol
   c. Fentanyl d. Morphine

   Postoperative shivering can occur due to:
   ☞ *hypothermia;*
   ☞ *general anaesthesia itself;*
   ☞ *regional anaesthesia (e.g. spinal or epidural anaesthesia). Routine recovery room monitoring (non-invasive blood pressure, saturation monitor, ECG) can be affected by shivering or other movement. Drugs that can be used to avoid or treat shivering include:*
   ☞ *pethidine*
   ☞ *ondansetron*
   ☞ *anticholinesterases, e.g. physostigmine*
   ☞ *propofol*
   ☞ *doxapram.*

   Pethidine is opioid analgesic. It is used for moderate to severe pain management. It is also used to manage post-anesthetic pain management.

3. **For Total intravenous anaesthesia (TIVA), which of the following drug is used?**
   a. Ketamine b. Propofol
   c. Thiopentone d. Etomidate

   ☞ *The drug used for total intravenous anesthesia is ketamine. Ketamine is a phencyclidine derivative. It is only iv induction agent with analgesic effect. It maintains upper airway reflexes. It can be used when supply of oxygen monitoring of patient and equipments are limited.*

4. **Muscle relaxant used in Rapid sequence intubation**
   a. Atracurium b. Vecuronium
   c. pancuronium d. Suxamethonium

   ☞ *Suxamethonium is the shortest acting muscle relaxant. It has most rapid onset (10-30 sec) and shortest duration of action (3-5 min). It is used for rapid sequence induction.*

5. **Best bronchodilator effect seen with**
   a. Propofol
   b. Ketamine
   c. Sodium thiopentone
   d. Etomidate

   ☞ *Ketamine is a potent bronchodilator. It is preferred in asthmatics. Propofol causes profound respiratory depression. Etomidate has no effect on respiration. Sodium thiopentone causes respiratory depression.*

6. **Minimum time to stop clear fluid before General Anaesthesia is**
   a. 2 hour b. 4 hour
   c. 6 hour d. 8 hour

   Rule of fasting for surgery:
   ☞ ***8 hours** after a meal that includes meat, fried or fatty foods*
   ☞ ***6 hours** after a light meal (such as toast or crackers) or after ingestion of infant formula or nonhuman milk*
   ☞ ***4 hours** after ingestion of breast milk*
   ☞ ***2 hours** after clear fluids (water, black coffee, tea, carbonated beverages, juice without pulp)*

7. **In CPR, role of adrenaline is mainly mediated through which receptor?**
   a. α_1 b. α_2
   c. β_1 d. β_2

   ☞ *During CPR, adrenaline is used for agonist action for primarily β1 and, to a lesser extent,α1- and β2-adrenergic receptors. The main objective is to increase the contractility and increase cardiac output.*

8. **Which of the following is not a pre–anaesthetic medication?**
   a. Metoclopramide
   b. Ranitidine
   c. Aspirin
   d. Diazepam

The 6 As for pre-anesthetic medications are:

- ***A**nxiolysis (DIAZEPAM, MIDAZOLAM)*
- ***A**mnesia (DIAZEPAM)*
- ***A**nti-emetic (METOCLOPRAMIDE)*
- ***A**ntacid (RANITIDINE)*
- ***A**nti-autonomic (ATROPINE, HYOSCINE, ATENOLOL, ESMOLOL)*
- ***A**nalgesia (MORPHINE, PETHIDINE, FENTANYL)*

Aspirin should be stopped atleast 5 days before elective surgery, because of its antiplatelet action and risk of bleeding.

ANSWERS

1.c Prevention of aspiration	2.a Pethidine
3.a Ketamine	4.d Suxamethonium
5.b Ketamine	6.a 2 hour
7.c β1	8.c Aspirin

Dermatology

9. When the skin lesion involve whole of epidermis and part of dermis it is known as :–

a. Erosion b. Fissure
c. Burrow d. Ulcer

10. Most common dermatological condition in infant is :–

a. Diaper rash
b. Seborrheic dermatitis
c. Eczemas
d. Bilious impetigo

Diaper rash, it is the most common dermatological condition in infants. It is an irritant dermatitis, due to prolonged contactwith feces and urine. Aggravated by the use of water-proof plastic diapers. Clinical features include:

- *Moist, glazed erythema which affects area ofskin in contact with diapers.*
- *The depth of skinfolds typically spared*
- *Superadded infection with candida is frequent.*

11. Flat skin lesion, different in texture from surrounding skin, size < 1 mm is :–

a. Macule b. papule
c. Plaque d. Nodule

Lesion characteristics

- ***Macule**: a flat, circumscribed area of skin discoloration< 0.5 mm (>0.5 mm macule is called patch)*
- ***Papule**: a circumscribed elevation of the skin <0.5 cm in diameter*
- ***Nodule**: a circumscribed visible or palpable lump, >0.5 cm*
- ***Plaque**: a circumscribed, disc - shaped, elevated area of skin:*

  'small' <2 cm in diameter

  'large' >2 cm in diameter
- ***Vesicle**: a small visible collection of fluid (≤0.5 cm in diameter)*
- ***Bulla**: a large visible collection of fluid (≥0.5 cm)*
- ***Pustule**: a visible accumulation of pus*
- ***Ulcer**: a loss of epidermis (often with loss of underlying dermis and subcutis as well)*
- ***Weal**: a circumscribed, elevated area of cutaneous edema*

Surface characteristics

- ***Scale**: visible and palpable flakes due to aggregation and/or abnormalities of shed epidermal cells*
- ***Crust:** accumulated dried exudate, e.g. serum*
- ***Horn:** an elevated projection of keratin*
- ***Excoriation**: a secondary, superficial ulceration, due to scratching*
- ***Maceration**: an appearance of surface softening due to constant wetting*
- ***Lichenification**: a flat - topped thickening of the skin often secondary to scratching*

Psychiatry

12. Confabulation is a disorder of

a. Memory b. Intelligence
c. Affect d. Thought

- *Confabulation is a memory disturbance, defined as the production of fabricated, distorted or misinterpreted memories about oneself or the world, without the conscious intention to deceive. Most common causes of confabulation are symptomatic of brain damage or dementias, such as aneurysm, Alzeimer's disease, or Wernicke-Korsakoff syndrome.*

13. Drug used in BPAD?

a. Lithium b. Sertraline
c. Amitryptyline d. Fluoxetine

- *Bipolar disorder is a mental illness with periods of depression and periods of elevated mood. Drugs commonly used are Lithium, Carbamazepine, sodium valproate, lamotrigine.*

ANSWERS

9.d Ulcer	10.a Diaper rash	11.a Macule	12.a Memory	13.a Lithium

ENT

14. 28 year old female, presented in the OPD with complain of Anosmia & occasional bleeding from both nostrils. On examination there was presence of foul smelling greenish discharge & crust. What is the likely diagnosis?

a. Chronic rhino sinusitis
b. Allergic rhinitis
c. Atrophic rhinitis
d. Rhinosporodiosis

Atrophic rhinitis is the chronic inflammation of the nose characterized by atrophy of nasal mucosa, including the glands, turbinate bones and the nerve elements supplying the nose. The clinical features are:

- *Most commonly seen in female*
- *Anosmia (patient herself does not perceive the foul smell)*
- *Nasal cavities become roomy and are filled with foul smelling black or dark green crusts*
- *There may be nasal bleed due to dry mucosa and crusts*

15. 8 years old child was brought to OPD by his mother with complaints of increased sleepiness, decreased attention in class. On examination, features of serous otitis media seen along with high arched palate, pinched nose & crowded teeth, what is the most likely diagnosis ?

a. Adenoid facies
b. Angiofibroma
c. Ethmoid polyp
d. Hypertrophic turbinate

Adenoid hypertrophy or enlarged adenoids causes an obstruction of the nasal airways leading to a dentofacial growth anomaly called adenoid facies. It is commonly seen in children with excessive middle ear infections.

The clinical features include:

Nasal obstruction:

- *Adenoid facies (open mouth, high arched palate, narrow midface, malocclusion)*
- *History of hypernasal voice and snoring*
- *Long term mouth breather; minimal air escape through nose*

Choanal obstruction:

- *Chronic rhinosinusitis/rhinitis*
- *Obstructive sleep apnea*

chronic inflammation:

- *Nasal discharge, post-nasal drip, and cough*
- *Cervical lymphadenopathy*

16. 40 years male chromic smoker with 3 month history of hoarseness of voice, now complaints of hard palpable mass in Left side of neck, most likely diagnosis is?

a. vocal cord polyp with lymphadenitis
b. vocal cord nodule with lymphadenitis
c. Laryngeal carcinoma with neck metastasis
d. Chronic laryngitis

- *Laryngeal carcinoma is common in male smokers of age group 40-70 years. The common presentation is hoarseness of voice for more than 3 weeks, gradually increasing or persistent. The mass in the neck may be lymphatic spread.*

17. Body of the hyoid removed in surgery of which of the following condition

a. Cystic hygroma
b. Thyroglossal cyst
c. Branchial cyst
d. Sub–hyoid bursitis.

- *Treatment of the thyroglossal cyst is sistrunk procedure: surgical resection of the cyst to the base of the tongue and removal of the central portion of the hyoid bone. It is indicated to ensure the complete removal of the tract.*

18. Most common causative organism of Ludwig's angina is :–

a. Streptococcus pneumonia
b. Staphylococcus aureus
c. Bacteroides
d. E.Coli

- *Ludwig's angina is a potentially life threatening cellulitis, or the connective tissue infection, of the floor of the mouth, usually occurring in adults with concomitant dental infections and if left untreated, may lead obstruct the airways. It is a mixed infection of both aerobes and anaerobes. Typically, the organisms involved are alpha-hemolytic streptococcus (most common), staphylococcus and bacteroides.*

19. Normal hearing level according to WHO?

a. 0–20 dB b. 0–25 dB
c. 5–20 dB d. 5–25 dB

WHO's Classification of the Degree of Hearing Loss, 1992	
Normal	*0-25 dB*
Mild	*26-39 dB*
Moderate	*40-59 dB*
Severe	*60-79 dB*
Profound	*80 dB and above*

ANSWERS		
14.c Atrophic rhinitis	15.a Adenoid facies	16.c Laryngeal carcinoma..
17.b Thyroglossal cyst	18.a Streptococcus pneumonia	19.b 0–25 dB

Ophthalmology

20 **Image formed in Myopia ?**

a. In front of Lens.
b. In front of retina
c. Behind the retina
d. At retina.

Myopia:	*Hypermetropia:*
• *Shortsightedness.*	• *Long-sightedness.*
• *Patients can see clearly close up, but their distance vision is blurred.*	• *Patient can see clearly in the distance but not near.*
• *Optics: the focal point is in front of the retina. (image forms in front of retina) Divergent light rays falling on the retina produce a blurred image.*	• *Optics: the focal point is behind the retina. (image forms behind retina) The converging rays that fall on the retina produce a blurred image.*
• *Cause: most commonly, excessive axial length (axial myopia);rarely due to too great refractive power (e.g. cataract refractive myopia).*	• *Cause: the axial length is too short.*
• *Correction: concave (minus) glasses.*	• *Correction: convex (plus) glasses*

20.b In front of retina	21.a Rods	22.b Pilocarpine

21. **Night vision is due to?**

a. Rods b. Choroid
c. Cones d. Macula

☞ *Rod cells are photoreceptor cells in the retina of the eye that can function in less intense. Rods are entirely responsible for night vision. Cones are responsible for color vision .*

22. **Anti-glaucoma drug causing miosis ?**

a. Timoolol b. Pilocarpine
c. Acetazolamide d. Atropine

Drug category	*Effect*	*Side effects/ Comments*
α-Agonist ***Non-selective*** • *epinephrine HCl 1%* • *dipivalyl epinephrine 0.1%* ***α2-selective*** • *brimonidine 0.2%* • *apraclonidine 0.5%*	1. *Non-selective: decrease aqueous production + increase TM outflow* 2. *Selective: decrease aqueous production + increase uveoscleral outflow*	1. *Non-selective: mydriasis, macular edema, tachycardia* 2. *Selective: contact allergy, hypotension in children*
β-Blocker ***Non-selective*** • *timolol* • *levobunolol* ***β1-selective*** • *betaxolol*	*Decrease aqueous production*	***Bronchospasm (caution in asthma/COPD)*** *CHF* *Bradycardia* *Hypotension* *Depression* *Heart block* *Impotence*
Carbonic Anhydrase Inhibitor • *dorzolamide* • *brinzolamide* • *oral: acetazolamide*	*Decrease aqueous production*	***Must ask about sulfa allergy*** *Generally local side effects with topical preparations* *Oral: diuresis, fatigue, paresthesias, GI upset, etc.*
Parasympathomimetic *(cholinergic stimulating)* • *pilocarpine* • *carbachol*	*Increase TM outflow*	*Miosis* *decrease night vision* *increase GI motility* *Brow ache* *Headache* *decrease heart rate*
Prostaglandin Analogues • *latanoprost* • *travaprost* • *bimatoprost*	*Increase uveo-scleral outflow*	*Iris colour change* *Periorbital skin pigmentation* *Lash growth* *Conjunctival hyperemia*

23. Normal IOP is :–

a. 5–10 mm of Hg b. 5–20 mm of Hg
c. 10–25 mm of Hg d. 10–21 mm of Hg.

☞ *The normal intraocular pressure is 10 -21 mm of Hg.*

24. Immune ring infiltrate is seen in:–

a. Bacterial Keratitis
b. Fungal Keratitis
c. Discoid Keratitis
d. Punctate epithelial Keratitis.

25. Not a part of uveal tract:–

a. Iris b. Choroid
c. Cillary body membrane d. Bowman's

☞ *Uveal tract includes iris, ciliary body and choroid. Bowman's membrane is the smooth, acellular, nonregenerating layer of the cornea, located between the superficial epithelium and the stroma.*

ANSWERS		
20.b In front of retina	21.a Rods	22.b Pilocarpine
23. d 10–21 mm of Hg.	24.c Discoid Keratitis	25. d Bowman's membrane

Orthopaedics

26. Fracture of the upper third of ulna with dislocation of proximal radio –ulnar joint?

a. Galeazzi fracture
b. Smith fracture
c. Aviator's fracture
d. Monteggia fracture

☞ ***Galeazzi fracture*** *is a fracture of the lower third or lower fourth of radius with subluxation or dislocation of inferior radioulnar joint (DRUJ-distal radioulnar joint).*

☞ ***Smith's fracture*** *is defined as transverse fracture of the lower radius within an inch of the articular surface with volar displacement of the fractured fragment (Also known as reverse "Colles'Fracture").*

☞ ***Aviator's fracture*** *is the fracture of the neck of the talus.*

☞ ***Monteggia fracture*** *is defined as the fracture of the proximal ulna with subluxation or dislocation of the superior radioulnar joint.*

27. 8 years old child presented with swelling of arm following fall from height. On examination he is unable to extend wrist and fingers, which of the following nerve is most likely have damaged?

a. Median nerve b. Radial nerve
c. Ulnar nerve d. Axillary nerve

☞ *The inability to extend wrist and fingers is due to injury to the radial nerve. Radial nerve injury causes wrist drop.*

28. Which of the following is the correct sequence of correction by Ponsetti method in CTEV?

a. Varus → adduction → Equinus
b. Varus → Equinus → Adduction
c. Adduction → varus → Equinus
d. Equinus → varus →adduction.

☞ *The four deformities of CTEV are Cavus midfoot, forefoot Adductus, subtalar Varus, hindfoot Equinus.* ***[@CAVE].*** *The correction by Ponsetti method is [@CAVE]Cavus: dorsiflex 1st ray, Adductus/Varus: talar head is the fulcrum for correction, andEquinus: dorsiflex ankle.*

29. Most common bone tumor in adult is:–

a. Osteoma
b. Osteosarcoma
c. Osteochondroma
d. Secondary metastasis

☞ *Most common malignancy of bone: secondaries*

☞ *Most common primary malignant bone tumor: Multiple myeloma>osteosarcoma>chondrosarcoma>Ewing's >GCT*

☞ *Most common true primary malignant bone tumor: osteosarcoma*

☞ *Most common true benign tumor: osteoid osteoma*

30. Longitudinal growth of bone is due to ?

a. Membranous ossification
b. Enchondral Ossification
c. Hypertrophy of bone
d. Hyperplasia of bone

☞ *Longitudinal growth of the bone is due to the cartilaginous plate. The zone of enchondral ossification is the site of actively growing bone that results in new bone formation. In enchondral ossification, the pre-existing hyaline model of bone is gradually replaced by bone. Most long bones are formed in this way.*

31. Maintenance of Bone & Bone matrix is by:–

a. Osteocyte
b. Osteoblast
c. Osteoclast
d. Osteoprogenitor cells

26.d Monteggia fracture	27.b Radial nerve	28.c A → V → E	29. d. Secondary mets
30.b Enchondral Ossification	31.a Osteocyte	32.a Atlas	33.d Facial paralysis

Osteoblasts	*- Function: produce bone matrix ("osteoid"). Make type 1 collagen and other matrix proteins* *- Line new bone surfaces and follow osteoclasts in cutting cones* *- Receptors: PTH (parathyroid hormone), vitamin D, glucosteroids, estrogen, PGs, ILs*
Osteocytes	*- Osteoblast surrounded by bone matrix. Represent 90% of all bone cells* *- Function: maintain & preserve bone. Long cell processes communicate via canaliculi.* *- Receptors: PTH (release calcium), calcitonin (do not release calcium)*
Osteoclasts	*- Large, multinucleated cells derived from the same line of cells as monocytes & macrophages* *- Function: when active, use a "ruffled border" to resorb bone; found in Howship's lacunae* *- Receptors: calcitonin, estrogen, IL-1, RANK L. Inhibited by bisphosphonates*

32. **Spinous process is absent in :–**

a. Atlas
b. 2nd cervical vertebrae
c. 7th cervical vertebrae
d. 8th cervical vertebrae

Atlas is the first cervical vertebrae. It is ring shaped. It has no body and spinous process. Axis is the second cervical vertebrae shich is identified by the dens or the odontoid process.

33. **Which of the following is not complication of cervical injury ?**

a. Bed sore
b. UTI
c. Chest infection
d. Facial paralysis

Facial paralysis is due to facial nerve injury, either UMN or LMN. C-spine injury can cause quadriparesis, bowel/bladder involvement or chest involvement on long term.

ANSWERS

26.d Monteggia fracture	27.b Radial nerve	28.c A → V → E	29. d. Secondary mets
30.b Enchondral Ossification	31.a Osteocyte	32.a Atlas	33.d Facial paralysis

Anatomy

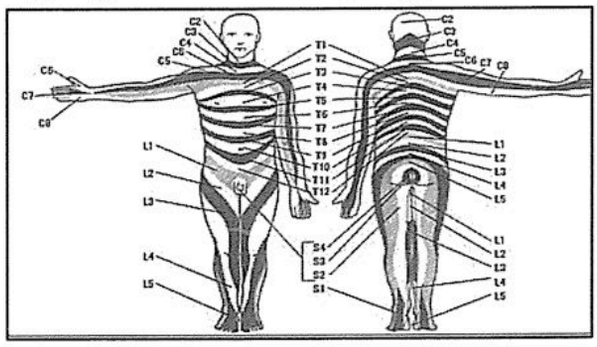
34. **Primordial Germ cell is formed by:**

a. Epiblast
b. Hypoblast
c. Allantois
d. Yolk–sac

Primordial germ cells develop from the epiblast or the primary ectoderm (also called embryonic ectoderm). The primordial germ cell develops earlier within the epiblast (primary ectoderm) and then migrates to within the endoderm of the yolk sac wall.

35. **Skin around umbilicus is supplied by :–**

a. T_6
b. T_8
c. T_{10}
d. T_{12}



36. **False regarding anatomy of stomach:–**

a. Pylorus lies at L_1
b. Cardia lies at T_{12}
c. Covered fully by Peritoneum
d. Supplied by branch of celiac trunk

Stomach lies obliquely in the upper left abdomen, covered by the peritoneum. The cardia lies at the level of T_{11}. The pyloric orifice lies at the level of L_1or the transpyloric plane. The blood supply is from the left gastric artery and the splenic artery and the hepatic artery which are the branches of the celiac trunk.

37. **Which of the following is not a component of Triceps suralis ?**

a. Gastrocnemius
b. soleus
c. Plantaris
d. popliteus

The triceps surae is connected to the foot through Achilles tendon, and has 3 heads deriving from the 2 major masses of muscle. The muscles are gastrocnemius and the soleus. Plantaris is also considered as a part of it as it attaches to the foot with the Achilles tendon.

ANSWERS

34.a Epiblast	35.c T10	36.b Cardia lies at T12	37. d. popliteus

Forensic Medicine

38. **Testamentary capacity is:–**

a. Ability to make a valid will
b. Ability to test
c. Ability to present evidence
d. Ability to provide opinion in court

Testamentary capacity is the mental ability of a person to make a valid will.

38.a Ability to make a valid will

39. On compression of chest of dead body, frothy liquid comes out of nostril, probable cause of death is

a. Hanging b. Drowning
c. Gunshot d. Throttling

- *Signs of antemortem drowing: a fine, copious, persistent, white leathery froth at mouth and nostrils is the most characterstic external sign of drowining. It increases with compression of chest, even if wiped away it reappears. A finding of diatoms in tissue, esp. bone marrow of femur is highly suggestive of antemortem drowning.*

40. Which of the following is true about strangulation?

a. Horizontal ligature mark with ecchymosis
b. Fracture of Hyoid bone
c. salivation from angle of mouth
d. signs of Asphyxia

- *Strangulation is a form of asphyxia which is caused by constriction of the neck by ligature without suspending the body.*
- *In ligature strangulation, horizontal ligature mark is seen.*
- *Ligature mark is transverse, completely encircling the neck below the thyroid cartilage.*
- *Bruising or rupture of the neck muscles is common with face cyanosed and congested.*
- *# of thyroid cartilage may be present.*
- *Chances of # of hyoid bone are max^{m}in throttling (manual strangulation)>strangulation>hanging.*

41. Neurotoxin venom seen in:–

a. Sea snake b. Russel viper
c. Krait d. pit viper

Poisonous snakes:

- *Elapidae family (Cobra, Krait): neurotoxic*
- *Viper: hematotoxic, vasculotoxic*
- *Sea/Marine snakes: myotoxic (marked muscle weakness, polymyositis).*

42. Belladona alkaloid in infant causes

a. Dehydration b. Hyperthermia
c. AV block d. Bradycardia

- *The belladonna alkaloid contains atropine, hyoscine (scopolamine), and hyoscyamine with anticholinergic properties. The symptoms of belladonna poisoning are dilated pupils, tachycardia, headache flushing severely dry mouth and throat, constipation, confusion, hyperthermia, delirium and convulsions.*

43. A farmer presented to ER after ingestion of unknown substance in his field, on examination his pupil were dilated B/L & temperature was 103°F, what is the likely substance ?

a. Organophosphate b. Dhatura
c. opium d. Rat poison

The signs and symptoms of Dhatura poisoning appears within ½ hrs after swallowing the poison

- *Vomiting*
- *Flushing of face due to cutaneous vasodilatation- **"RED AS A BEET"***
- *Pupils dilate & accommodation power is interrupted, hence vision suffers- **"BLIND AS A BAT"***
- *Dryness of mouth & throat- **"DRY AS A BONE"**, causing dysphasia, thirst.*
- *Body temperature is raised- **"HOT AS A HARE"***
- *Patient becomes confused, staggers as if drunk & then becomes delirious & utters indistinct words- **"MAD AS A WET HEN"***
- *Burning pain in stomach.*
- *May have visual and auditory hallucinations.*
- ***Corn picker's pupil**- unilateral mydriasis due to its pollen.*
- ***Carphologia**- patient pulls imaginary threads from his fingertips, threads imaginary needles.*
- *Death is rare & occurs usually from respiratory paralysis.*

The 8 'D's of Dhatura poisoning:

- ***D**ry mouth*
- ***D**ysphagia*
- ***D**ilated pupils*
- ***D**ry hot skin*
- ***D**runken gait*
- ***D**elirium*
- ***D**rowsiness*
- ***D**eath due to respiratory failure.*

44. Active ingredient of Ganja is :–

a. LSD
b. Tetrahydrocannabinol
c. Methylphenidate
d. None

- *The active ingredient in the cannabis (AKA hemp, hashish or marijuana) is tetrahydrocannabinol. It is CNS stimulant.*

PART-19

39.b Drowning | 40.a Horizontal ligature.. | 44.b Tetrahydrocannabinol
41.c Krait | 42.b Hyperthermia | 43.b Dhatura

48.b Population at risk			
49.a 20	50.a Carrier	51.a scrub typhus	52.d Malaria

ANSWERS		
38.a Ability to make a valid will	39.b Drowning	40.a Horizontal ligature..
41.c Krait	42.b Hyperthermia	43.b Dhatura
44.b Tetrahydrocannabinol		

Community medicine

45. When has safe motherhood started in Nepal?

a. 1985 b. 1987
c. 1995 d. 1997

☞ *Safe motherhood program in Nepal was started in Nepal in 1997 AD.*

46. Which of the following is a ratio?

a. incidence rate
b. Case fatality rate
c. Maternal mortality rate
d. Prevalence

☞ *The ratio expresses a relation in size between two random quantities. It is expressed in the form of x/y or x:y. The numerator is a component of the denominator in calculating a rate, but not in a ratio. E.g. Case fatality rate is simply the ratio of deaths to cases.*

☞ *A proportion is a ratio which indicates the relation in magnitude of a part of the whole. The numerator is always included in the denominator. It is expressed as a percentage.*

☞ *Prevalence is the proportion of people in a population who have a particular disease at a specified point in time, or over a specified period of time.*

☞ *Incidence rate (IR): the rate at which **new events** occur in a population. The numerator is the number of NEW events that occur in a definedperiod; the denominator is the population at risk of experiencing thisnew event during the same period.*

Case-fatality rate

$$= \frac{\text{deaths from a cause}}{\text{no.of persons with the disease or cause}} X\ 100$$

Maternal mortality rate =

$$\frac{\text{no.of female deaths due to complications of pregnancy, childbirth or within 42 days of delivery from puerperal causes in an area in a given year}}{\text{total no.of live births in the same year and place}} X\ 1000$$

47. Incidence is defined as :–

a. Number of new case per thousand of population
b. Number of old case per thousand of population
c. Number of(new+ old) case per thousand of population
d. None.

☞ *Incidence rate (IR): the rate at which **new events** occur in a population. The numerator is the number of NEW events that occur in a defined period; the denominator is the population at risk of experiencing this new event during the same period.*

☞ *Incidence rate =*

$$\frac{\text{Number of new events in a specified period}}{\text{Number of persons "exposed to risk" of becoming new cases during this period}} X\ 10n$$

48. Denominator in case of incidence

a. Total population
b. Population at risk
c. Total live birth
d. woman of reproductive age

☞ *Incidence rate (IR): the rate at which **new events** occur in a population. The numerator is the number of NEW events that occur in a defined period; the **denominator** is the population at risk of experiencing this new event during the same period.*

49. In a village of total population of 2000, 25 people suffer from cholera of which 5 people died. What is case fatality rate?

a. 20 b. 25
c. 10 d. 5

☞ *Case-fatality rate =*

$$\left[\frac{\text{deaths from a cause}}{\text{no. of persons with the disease or cause}} X\ 100\right]$$

50. Quarantine is done for

a. Carrier b. Contact
c. Diseased animal d. None

☞ *Quarantine is defined as "the limitation of freedom of movement of such well persons or domestic animals exposed to communicable disease for a period of time not longer than the longest usual incubation period of the disease." It is done for the carrier.*

51. Which is the tick borne disease recently cause hundreds of mortality?

a. scrub typhus
b. Tick –borne hemorrhagic fever
c. Tick –borne Enteric fever
d. Dengue

☞ *Scrub typhus is the tick borne disease causing mortality recently.*

52. Which is not amenable to eradication?

a. Measles b. Polio
c. Guinea worth d. Malaria

45.d 1997	46.b Case fatality rate	47.a new cases/1000	
		52.d Malaria	

Eradication is the termination of all transmission of infection by extermination of the infectious agent through surveillance and containment. It is an absolute process, an "all or none" phenomenon. To the date, the only disease eradicated is smallpox. In the stat of our present knowledge, diseases which are amenable to eradication are measles, diphtheria, polio and guinea worm.

53. Efficacy of contraception is measured by :

a. Pearl index only
b. Pearl index and couple protection rate
c. Couple protection rate
d. None

Contraceptive efficacy is generally assessed by measuring the number of unplanned pregnancies that occur during a specified period of exposure and use of a contraceptive method. The contraceptive efficacy is measured by the Pearl index and life-table expectancy.

54. According to WHO, Surveillance is recommended for all except:

a. Tuberculosis b. Malaria
c. Plague d. Polio

55. First case occurring in Epidemic is known as:–

a. Index case b. Primary case
c. Secondary case d. Tertiary case

A case is defined as "a person in the population or study group identified as having the particular disease, health disorder or condition under investigation". The term primary case refers to the first case of a communicable disease introduced into the population unit being studied. The term index case refers to the first case to come to the attention of the investigator; it is not always the primary case. Secondary cases are those developing from contact with primary case.

ANSWERS

45.d 1997	46.b Case fatality rate	47.a new cases/1000	48.b Population at risk
49.a 20	50.a Carrier	51.a scrub typhus	52.d Malaria
53.a Pearl index only	54.a TB	55. b. Primary case	

Microbiology

56. Which of the following organism causes convulsion?

a. Ascaris Lumbricoides
b. Ancylostoma duodenale
c. Hymenolepis nana
d. Enterobius vermicularis

Hymenolepis nana (dwarf tape worm) infection can cause enteritis, abdominal pain, diarrhea, and loss of appetite, restlessness, irritability, anal and nasal pruritus. Rarely, it can cause vomiting, dizziness, headache and seizures.

57. Widal test is a

a. Direct agglutination
b. Indirect agglutination
c. Complement fixation
d. Precipitation

Widal test is a direct agglutination test for enteric fever whereby bacteria causing typhoid fever are mixed with a serum containing specific antibodies obtained from an infected individual.

58. A child presented with a 6 month long history of jaundice, which of the following organism may be responsible?

a. Epstein Barr virus b. Hepatitis A
c. Hepatitis E d. Hepatitis B

The causes of chronic hepatitis are Hepatitis B virus (HBV), hepatitis C virus (HCV), hepatitis D virus (HDV, delta agent), drugs (methyldopa, nitrofurantoin, isoniazid, dantrolene), autoimmune hepatitis, Wilson's disease, hemochromatosis, a1-antitrypsin deficiency.

59. Which of the following culture medium is used for organism causing whooping cough?

a. Chocolate agar
b. Blood agar
c. Dubo's Medium
d. Bordet Gengou Medium.

Whooping cough or 100 day cough is caused by the bacterium Bordetella pertussis. The culture of the nasopharyngeal swab on a nutrient medium, Bordet-Gengou medium shows the Gram-negative, encapsulated coccobacillus.

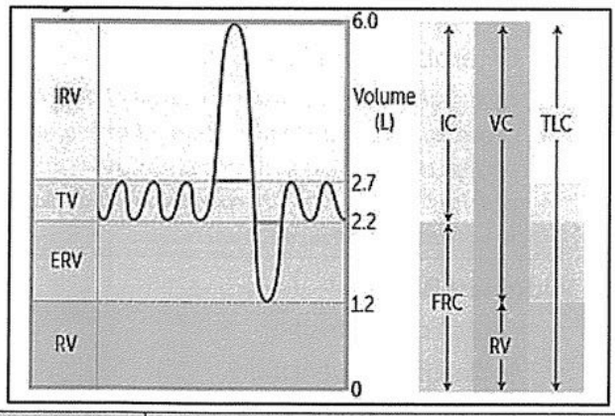
ANSWERS

56.c Hymenol-epis nana	57.a Direct agglutination	58.d Hepatitis B	59.d Bordet Gengou Medium

Physiology

60. Tidal volume is:

a. IC –IRV b. TLC –VC
c. IC –FRC d. VC –ERV



Tidal volume	Air that moves into lung with each quiet inspiration, typically 500 mL
Inspiratory reserve volume	Air that can still be breathed in after normal inspiration
Expiratory reserve volume	Air that can still be breathed out after normal expiration
Residual volume	Air in lung after maximal expiration; cannot be measured on spirometry
Inspiratory capacity	IRV + TV
Functional residual capacity	(RV + ERV) Volume of gas in lungs after normal expiration; includes RV, cannot be measured on spirometry
Vital capacity	(TV + IRV + ERV) Maximum volume of gas that can be expired after a maximal inspiration
Total lung capacity	IRV + TV + ERV + RV Volume of gas present in lungs after a maximal inspiration; includes RV, cannot be measured by spirometry

61. Which of the following immunoglobin is maximum in serum?

a. Ig D
b. IgE
c. IgM
d. IgG

- *IgM is the first isotype of antibody that can be produced. It exists in serum as a pentamer held together by a joining (J) chain. The functions of IgM are (as a monomer) receptor on B cells, antigen capture in the secondary lymphoid organs, and (as a pentamer) in plasma, activationof complement.*
- *IgG is the major isotype produced after IgM. It exists in 4 subisotypes. It activates complement, opsonizes, mediates ADCC, and is actively transported across the placenta.*
- *IgA is the major isotype produced in the submucosa, colostrum, and breast milk. It is a dimer with a J chain holding it together. It functions in inhibiting the bind- ing of substances to cells or mucosal surfaces. It does not activate complement or mediate opsonization.*
- *Secretory IgA is transported into the lumen of the gastrointestinal, respiratory, or genitourinary tracts by binding to a polyimmunoglobulin receptor. This receptor (now called a secretory component) is retained for protection of IgA from proteolytic cleavage.*
- *IgE is the antibody that binds to mast cells and is responsible forantihelminthic and allergic responses.*

	IgM	IgG	IgA	IgD	IgE
Adult serum levels (in mg/dL)	45–250	620–1,400	80–350	Trace	Trace
Heavy chain	μ	γ	α	Δ	E

62. A couple presented to subfertillity clinic with complain of unable to conceive even after marriage of five year. Male partner was found to have azoospermia, had enlarged b/l breast and decreased testicular size,which of the following chromosomal abnormalities is likely?

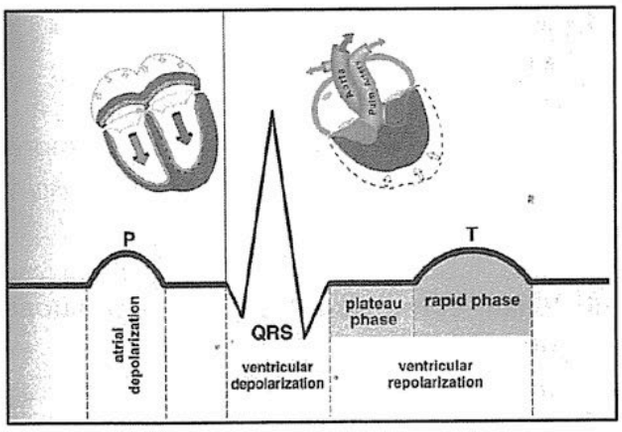
a. 47X XY
b. 47 X YY
c. 45XO
d. Trisomy of 21

- ***Klinefelter syndrome** is caused by meiotic nondisjunction and is a common causeof male hypogonadism. The most common karyotype is 47, XXY. Lab studies showelevated FSH and LH with low levels of testosterone. Clinical findings include testicularatrophy, infertility due to azoospermia, eunuchoid body habitus, high-pitchedvoice; female distribution of hair; and gynecomastia.*

63. QRS complex represent?

a. Atrial depolarization
b. Atrial repolarization
c. Ventricular repolarisation
d. Ventricular depolarization

61.d IgG	62.a 47X XY	63.d Ventricular depolarization



64. Pulmonary surfactant produced by

a. Type –II pneumocytes
b. Type –I Pneumocytes
c. Goblet cells
d. Paneth cells.

Pulmonary surfactant is produced by type-II pneumocytes. Surfactant has 2 main functions:

- *It lowers surface tension forces in the alveoli. In other words, surfactant lowers lung recoil and increases compliance.*
- *It lowers surface tension forces more in small alveoli than in large alveoli. This promotes stability among alveoli of different sizes by decreasing the tendency of small alveoli to collapse (decreases the tendency todevelop atelectasis).*

65. ADH mediated water absorption is maximum in

a. PCT b. DCT
c. Collecting duct d. Loop of Henle

ADH is synthesized in the supraoptic (SO) and paraventricular (PVN) nuclei of the hypothalamus; it is stored and released from the posterior pituitary.

Action of ADH:

- *The main target tissue is the renal collecting duct (V2 receptors).*
- *ADH increases the permeability of the duct to water by placing waterchannels (aquaporins) in the luminal membrane.*
- *ADH, acting via the V1 receptor, contracts vascular smooth muscle*

66. Anti–Rh antibodies is:

a. IgA b. IgD
c. IgG d. IgE

- *The antibodies against D-antigen (Anti-Rh antibodies) are IgM type that develops as a primary immune response, and are short lived. IgM antibodies do not transfer via placenta. IgG antibodies are produced as the secondary response, are long lived and can cross placenta leading to the Rh-incompatibility*

ANSWERS

60.a IC –IRV	61.d IgG	62.a 47X XY	63.d Ventricular depolarization
64.a Type –II pneumocytes	65.c Collecting duct	66.c IgG	

Pathology

67.c C_5a | 68.a II, VII, IX, X | 69.c Ibuprofen

67. Which of the following is a chemotactic agent?

a. C_3b b. C_4b
c. C_5a d. C_5b

- ***Chemotaxis** is the attraction of cells toward a chemical mediator that is releasedin the area of inflammation. Important chemotactic factors for neutrophils includebacterial products such as N-formyl-methionine and host derived molecules such asleukotriene B4 (LTB4), complement system product **C5a**, and α-chemokines (IL-8).*

68. Vit–K dependent clotting factor are:–

a. II, VII, IX, X b. II, III, VII, X
c. II, V, VII, X d. II, VII,IX, XI

- *The vitamin dependent clotting factors are Factor II, VII, IX and X. Vit-K acts as a cofactor at a late stage inthe synthesis by liver of coagulation proteins—prothrombin, factors VII, IX and X. The vit-Kdependent change (γ carboxylation of glutamateresidues of these zymogen proteins; confers on them the capacity to bind Ca2+ and to getbound to phospholipid surfaces—propertiesessential for participation in the coagulationcascade.*

69. Reversible inhibitor of platelet cycloxygenase

a. Alfentrosodil b. Aspirin
c. Ibuprofen d. Clopidogrel

Reversible inhibitors of COX 1 and COX 2, with analgesic, antipyretic, and antiinflammatory actions, include:

- *Ibuprofen*
- *Naproxen*
- *Indomethacin*
- *Ketorolac*
- *Sulindac*

Aspirin inhibits COX irreversibly by acetylating one of its serine residues.

Clopidogrel is an oral anti-platelet agent that acts by inhibiting the ADP receptor on platelet cell membranes. Its action on platelet ADP receptor is irreversible.

PART-19

70. **Thromboxane A_2- Causes platelets aggregation, which of the following inhibit platelet aggregation?**

a. PGE_2 b. $PGF_2\alpha$
c. PGE_1 d. PGI_2

Arachidonic acid products:

Cyclooxygenase pathway

- *Thromboxane A2 is produced by platelets and causes vasoconstrictionand platelet aggregation.*
- *Prostacyclin (PGI2) is produced by vascular endothelium and causesvasodilation and inhibition of platelet aggregation.*
- *Prostaglandin E2 causes pain.*
- *Prostaglandins PGE2, PGD2, and PGF2 cause vasodilatation.*

Lipoxygenase pathway

- *Leukotriene B4 (LTB4) causes neutrophil chemotaxis, while leukotriene C4,D4, E4 causes vasoconstriction. Lipoxins are anti-inflammatory products whichinhibit neutrophil chemotaxis.*

ANSWERS			
67.c C_{5a}	68.a II, VII, IX, X	69.c Ibuprofen	70.d PGI_2

Biochemistry

71. **Bence Jones proteins have**

a. Cryoglobulin
b. C reactive protein
c. Light chain protein
d. Heavy chain

- *In about 20% patients of myeloma, only light chains are produced and secreted in the urine as **Bence Jones protein***

72. **Not an essential amino acid**

a. Lycine b. Isoleucine
c. Phenylalanine d. Tyrosine

- ***Essential amino acids:** Phenylalanine, Valine, Tryptophan, Threonine, Isoleucine, Methionine, Histidine, Arginine, Leucine, Lycine@ PVT TIM HALL*

73. **Which of the following doesn't act as antioxidant:**

a. Vitamin A b. Vitamin C
c. Vitamin E d. Vitamin D

- *Antioxidants are substances that help protect cells from the damaging effects of oxygen free radicals and highly reactive compounds that are created during normal cell metabolism. Examples of antioxidants are enzymes superoxidase, dismutase and peroxidases and Vitamins A, C and E*

74. **Which of the following hormones is an example of a peptide hormone?**

a. Adrenaline b. Cortisol
c. Thyroxine d. Parathormone

- *Parathyroid hormone is an 84-aa single chain peptide. It contains no carbohydrate or other covalently bond molecules.*

75. **Which of the following is not a component of DNA?**

a. Guanine b. Uracil
c. Thymidine d. Adenine

- ***Uracil** is a pyrimidine base found in RNA (not DNA), which if paired pairs with Adenine.*

ANSWERS				
71.c Light chain protein	72. d Tyrosine	73. d Vitamin D	74.d Parathormone	75.b Uracil

Pharmacology

76. **In a patient with chronic congestive cardiac failure, all of the following drugs prolong survival except**

a. ACE inhibitor
b. Digoxin
c. Metoprolol
d. Carvidelol

Benefits of using beta blockers in CHF:

- *Control tachycardia and effect of high cathecholamine level*
- *Has beneficial effect in remodeling*
- *Decreasing risk of sudden cardiac death*

Benefits of using ACE Inhibitor:

- *Consider in all patients with Left ventricular systolic dysfunction, improves symptoms and prolongs life.*
- *Reduces afterload*
- *Digoxin decreases overall morbidity but has no role in prolonging survival.*

77. **Which of the following is Drug of choice for focal seizure?**

a. Sodium valporate b. Carbamazepine
c. Ethosuximide d. Phenobarbitone

Selection of Antiepileptic Drugs:

- *Generalized tonic Clonic Seizure : Valroic acid (1st line), Lamotrigine (2nd line)*
- *Focal Seizure: Lamotrigine (1st line), Carbamazepine (2nd line)*
- *Absence Seizure : Ethosuximide (1st line) Valproic acid (2nd line)*

76. b Digoxin	77. b Carbamazepine	78.a Captopril
79.c Cefipime	80.b Blood Pressure	

- *Phenobarbital is 1st line of drug in seizure of neonates*
- *Drug of Choice for Status epiepticus: Benzodiazepines and Phenytoin/Fosphenytoin*

78. A 47 yrs male, K/c/o HTN under medication presents with dry cough. Most likely drug is?

a. Captopril b. Nifedipine
c. Propranolol d. Hydrochlorthiazide

Captopril (ACE inhibitor) side effects

- ***C**ough (dry)*
- ***A**ngioedema / Agranulocystosis*
- ***P**roteinuria / Potassium excess*
- ***T**aste changes*
- ***O**rthostatic hypotension*
- ***P**regnancy contraindication/ Pancreatitis/ Pressure drop (first dose hypertension)*
- ***R**enal failure (and renal artery stenosis contraindication) / Rash*
- ***I**ndomethacin inhibition*
- ***L**eukopenia / Liver toxicity*

79. Cell wall synthesis is inhibited by

a. Erythromycin b. Lomefloxacin
c. Cefipime d. Tetracycline

Cell wall synthesis inhibitors:

- *Beta lactams: Penicillin, Cephalosporin, Carbapenems, Monobactams*
- *Vancomycin*
- *Bacitracin*
- *Cefepime is a 4th generation cephalosporin*

80. Dobutamine increases

a. Heart rate b. Blood Pressure
c. Cardiac Output d. Plasma Volume

- ***Dobutamine** directly stimulates beta-1 receptors of the heart to increase myocardial contractility and stroke volume.*

ANSWERS

76. b Digoxin	77. b Carbamazepine	78.a Captopril	
79.c Cefipime	80.b Blood Pressure		
81.c Ethambutol commonly..	82.a Spirometry	83.d Nephrotic syndrome	84.a Troponin I → CPK-MB→ LDH

Medicine

81. All of the following are true about TB except:

a. Most common extra pulmonary site is lymph node
b. M. tuberculosis grow better in solid media than liquid media.
c. Ethambutol commonly causes Hepatitis
d. Extra pulmonary TB falls in category-I

- ***Ethambutol** is a **bacteriostatic** anti-tubercular drug. Remaining all 1st line ATT are bactericidal.*
- *ADR of Ethambutol : Optic neuritis and Hyperuricemia.*
- *Isoniazide, Rifampicin, Pyrazinamde cause hepatitis.*
- *Pryizinamide is the most hepatotoxic ATT.*

82. Which of the following is Gold standard test for COPD?

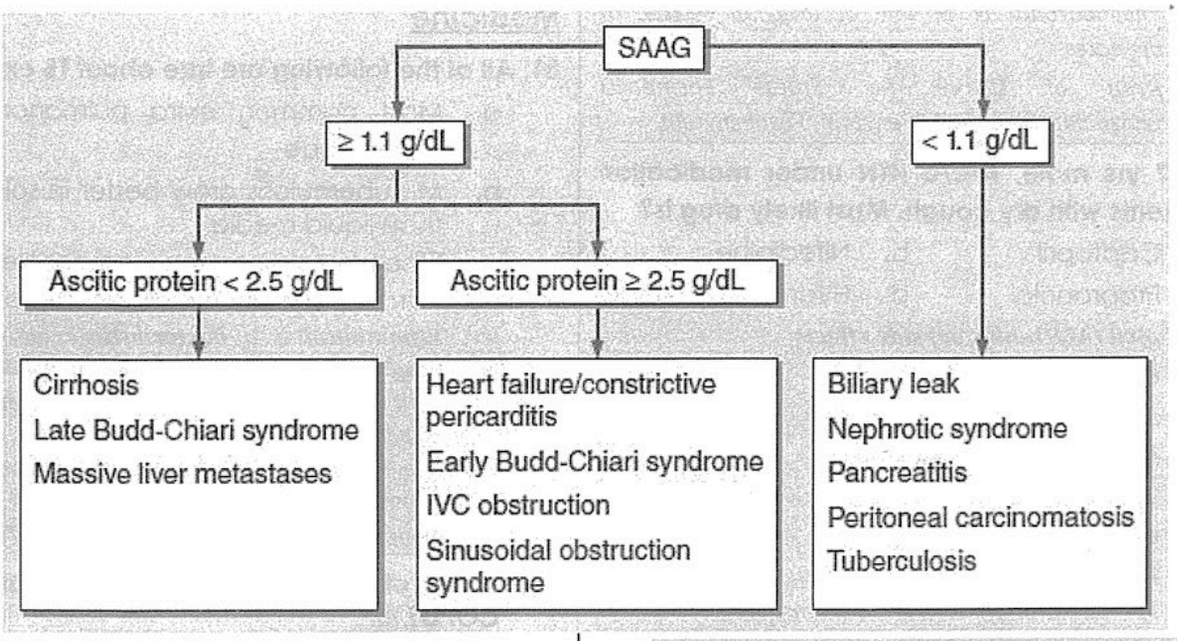
a. Spirometry
b. ABG
c. Chest-X-ray
d. Peak expiratory flow rate

83. Which of the following condition has SAAG < 1.1gm/dl?

a. CHF
b. IVC Obstruction
c. Liver cirrhosis
d. Nephrotic syndrome

Serum-Ascites Albumin Gradient

- *Normally, the ascitic fluid albumin level is less than the serum level. The difference between them is referred to as the serum-ascites albumin gradient, or SAAG.*
- *When this gradient, or SAAG, is >1.1, portal hypertension, as from cirrhosis, is generally the cause.*
- *When the SAAG is <1.1, it means the ascitic fluid albumin level is high. Cancer and infections generally give a SAAG <1.1.*
- *Remember to subtract the lower number (ascites albumin) from the higher number (serum albumin) when calculating SAAG.*



84. 5. Correct sequence of raise in cardiac Bio-marker in case of MI?

a. Troponin I → CPK-MB→ LDH
b. CPK-MB → LDH → Troponin I
c. CPK-MB → Troponin I→ LDH
d. LDH → Troponin I → CPK-MB

Serum Cardiac Markers:

- *CPK MB: Begins (6-12hrs), Peaks (16-32hrs), Normal in 2-3 days*
- *CPK MB : CPK ratio of >2.5 is highly suggestive of MI.*
- *CPK MB also raised in Myocarditis, Electrical Cardioversion, Cardiac Surgery*
- *LDH: Begins (12-24hrs), Peak(48-60hrs), Normal in 7-10 weeks*
- *Troponin I: normally not detectable in blood of healthy individuals but may increase after STEMI to levels >20 times higher than upper level so are preferred biochemical markers for MI.*
- *Troponin T: Becomes +ve within 2-4hrs and remains elevated upto 10-14 days. Troponin T is best test to diagnose acute MI.*

85. Blood culture at different site taken on different time done in case of ?

a. RF
b. Infective Endocardits
c. Malaria
d. Enteric fever

Diagnosis based on Duke's Criteria major criteria include

1. *Positive blood cultures*
2. *Evidence of endocardial involvement*

Blood Culture:

- *positive blood cultures drawn at least 12 hours apart or*
- *multiple positive cultures (at least 3 of 4) with the first and last drawn at least 1 hour apart*

86. 20 yr old female, came to OPD with h/o puffiness of face, swelling of B/L leg. O/E, BP - 150/90 mm of Hg, Urine R/E shows fat oval bodies, What is the most likely diagnosis?

a. Nephritic syndrome
b. Nephrotic syndrome
c. Obstructive Uropathy
d. Acute pyelonephritis

87. Which of the following level of HbA_1C shows good control of DM?

a. 8%
b. 9%
c. 10%
d. 12%

- *A normal HbA1C is <6% (or<5.7, depending on different books), and 5.7-6.4 is considered pre-diabetes.*
- *HbA1C above 6.4% is considered diagnostic of diabetes.*
- *A patient with controlled diabetes will have an HbA1C around 7% or less.*
- *HbA1C over 8% is considered poorly controlled diabetes.*
- *Among the options given in above question, HbA1c 8% shows good glycemic control than others.*

84.a

85.b Infective Endocardits	86.a Nephritic syndrome	87.a 8%	88.d HbA_1C < 6.5%

88. **All of the following meets diagnostic criteria of DM except?**
   a. Fasting blood glucose ≥ 126 mg/dl
   b. Post.- prandial glucose > 200 mg/dl
   c. Random blood sugar ≥ 200 mg/dl with sign & sytmptoms of DM
   d. $HbA_1C < 6.5\%$

Diabetes is diagnosed by any of the following criteria:

- *Classical triad of Symptoms of DM (polyuria, polydipsia, Wt loss) + Random Blood Sugar ≥200mg/dl*
- *Fasting Plasma glucose ≥ 126mg/dl*
- *Plasma Glucose ≥ 200mg/dl 2hrs after an oral glucose tolerance test with 75gm of glucose.*
- *HbA1c > 6.5%*

Impaired glucose tolerance on an Oral GTT is indicated by

- *Plasma Glucose 140-199mg/dl 2hrs after an oral glucose*
- *Fasting Plasma glucose 110-126mg/dl*
- *HbA1c 5.7%- 6.5%*

89. **Conn's syndrome include all of the following except:**
   a. Hypokalemia
   b. Hyponatremia
   c. Metabolic alkalosis
   d. Hypertension

- *Conn's Syndrome (Adrenal Adenoma): Usually unilateral and is most common cause of Primary Hyperaldosteronism.*

Clinical Features of Conn's Syndrome:

- *Weakness, Cramps, paraesthesia*
- *Polyuria, Polydipsia*
- ***Hypernatremia***
- ***Hypertension***
- ***Hypokalemia**: Ventricular arrhythmia, Muscle wasting (**Proximal Myopathy**), Impaired concentrating ability of Kidney due to hypokalemia causes polyuria, polydipsia*
- *Metabolic Alkalosis*

90. **Which of the following is false about Thalassemia?**
   a. Microcytic Hypochromic anemia
   b. Increase in HbA
   c. Increase in HbA_2
   d. Increase in HbF

- *Hemoglobin consists of 2 different pairs of peptide chains (one α and one β).*
- *Adults have 95% HbA ($\alpha_2\beta_2$) + 5% $HbA_2(\alpha_2\delta_2)$*
- *In Thalassemias, there is a reduced rate of production of one or more globin chains leading to precipitation of globin, and anemia occurs as a result of ineffective erythropoiesis and hemolysis*
- *The patient will have increased fraction of HbA_2 (>3.5%) and a decreased fraction of HbA(<97.5%)*
- *Fetuses have HbF ($\alpha_2\gamma_2$) which continues to persist in β-thalessemia*

91. **All of the following are true for GBS except?**
   a. Ascending paralysis
   b. Flaccid paralysis
   c. Sensory level
   d. Albumino-cytological dissociation

Diagnostic criteria for GBS

Required features

- *Progressive weakness in both arms and legs*
- *Areflexia (or hyporeflexia).*
- *Features supportive of diagnosis*
- *Progression of symptoms over days to 4 weeks*
- *Relative symmetry*
- *Mild sensory signs or symptoms*
- *Cranial nerve involvement, especially bilateral facial weakness*
- *Recovery beginning 2 to 4 weeks after progression ceases*

Autonomic dysfunction

- *Absence of fever at onset*
- *Typical CSF (albuminocytologic dissociation)*
- *EMG/nerve conduction studies (characteristic signs of a demyelinating process in the peripheral nerves)*

Features casting doubt on the diagnosis

- *Asymmetrical weakness*
- *Persistent bladder and bowel dysfunction*
- *Bladder or bowel dysfunction at onset*
- *>50 mononuclear leucocytes*

92. **True about P. falciparum malaria except?**
   a. No periodicily
   b. Fever is continuous
   c. Most dreaded complication - Cerebral Malaria
   d. Primaquine prevent the recurrence by attacking hypnozoites

PART-19

89.b	90.b	91.c	92.c
Hyponatremia	Increase in HbA	Sensory level	Most dreaded..

93.c 90days | 94.a Respiratory alkalosis | 95.a Bronchial Breath sound | 96.b GABS | 97.b DOC is Metformin | 98.a Increase RF and Anti-CCP | 99.b FEV1/FVC increase

93. HbA_1C shows the control of diabetes for last ..... days.

a. 30 days b. 50 days
c. 90 days d. 180 days

☞ *HbA1c estimate blood sugar control over an approximately 3 month period*

94. P^H = 7.5, PCO_2 = 30, HCO_3^- = 15 mm. Disorder is:

a. Respiratory alkalosis
b. Respiratory acidosis
c. Metabolic acidosis
d. Metabolic alkalosis

95. Which of the following is true about pleural effusion?

a. Bronchial breath sound above fluid level
b. Increased vocal resonance
c. Increased vocal fremitus
d. No tracheal deviation

Physical examination in pleural effusion:

☞ *Decreased breath sounds*
☞ *Dullness to percussion*
☞ *Bronchial breath sound above fluid level*
☞ *Decreased tactile fremitus versus consolidation, which produces increased tactile fremitus*

96. Which of the following organism causes Acute rheumatic fever?

a. Streptococcus pneumoniae
b. Group -A β-hemolytic streptococci
c. Staph. aureus
d. H. influenzae

97. Which of the following is true about diabetes:

a. Type-I DM → Insulin resistance
b. In type 2 DM → DOC is Metformin
c. Type-I DM commonly occurs in Elderly
d. DKA is common in Type-II

98. False about Reiter syndrome

a. Increase RF and Anti-CCP
b. Triad of Arthritis, Uveitus, Nnr-gonococcal urethritis.
c. NSAIDs is used for treatment
d. It is an autoimmune disorder

Reiter syndrome or Reactive Arthritis:

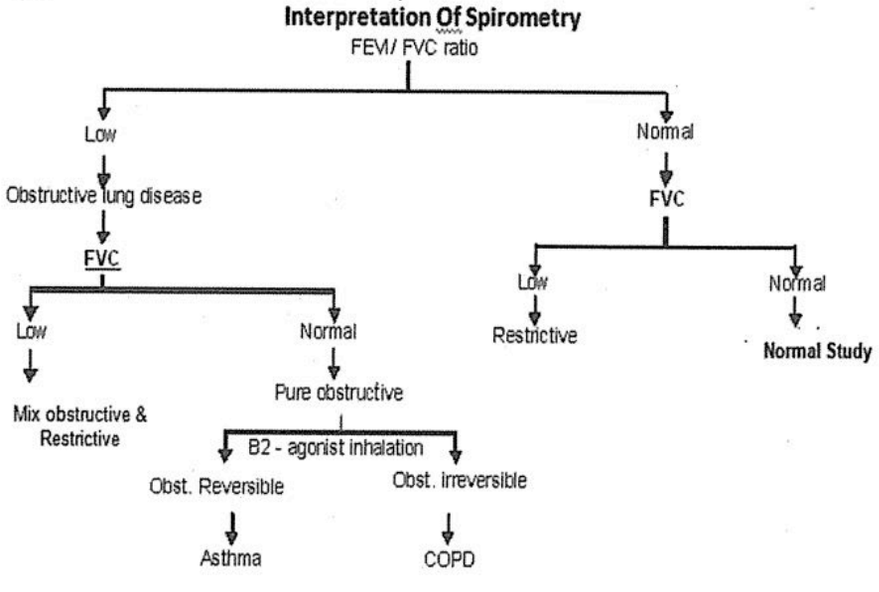
☞ *seronegative spondyloarthropathy characterized by triad of: urethritis, conjunctivitis or uveitis, arthritis* ***@ "can't see, can't pee, can't bend a knee"***
☞ *commonly follows urethritis with C. trachomatis or GI infections with certain pathogens (Salmonella, Shigella, Campylobacter, Yersinia)*

Serology

☞ *rheumatoid factor negative*
☞ *HLA-B27 positive in 75% of cases*
☞ *CRP elevated*
☞ *ESR elevated*
☞ *T/t :antibiotics, symptomatic treatment(NSAID), and observation. Steroids in some cases*

99. True about Restrictive Lung disease

a. Increase in DLCO
b. FEV_1/FVC increase or Normal
c. Increase VC and TLC
d. Bronchial Asthma is a type of Restrictive lung disease.



ANSWERS			
81.c Ethambutol commonly..	82.a Spirometry	83.d Nephrotic syndrome	84.a Troponin I → CPK-MB→ LDH
85.b Infective Endocardits	86.a Nephritic syndrome	87.a 8%	88.d HbA_1C < 6.5%
89.b Hyponatremia	90.b Increase in HbA	91.c Sensory level	92.c Most dreaded..
93.c 90days	94.a Respiratory alkalosis	95.a Bronchial Breath sound	96.b GABS
97.b DOC is Metformin	98.a Increase RF and Anti-CCP	99.b FEV1/FVC increase	

Pediatrics

100 **A Rh-ve mother delivers a baby whose fathers blood groups is B positive. What will be your next step ?**

a. anti - Rh antibodies should be given to baby.
b. Send cord blood for blood grouping
c. Blood transfusion
d. Nothing to be done

101. **Croup is characterized by**

a. Inspiratory stridor
b. Wheeze
c. Crackles
d. Expiratory stridor

Symptoms of Croup

- *prodromal upper respiratory symptoms like mild cough, sore throat followed by*
- *low-grade fever, dyspnea, inspiratory stridor, hoarseness, classic "barking cough"*
- *symptoms usually worsen at night*
- *Degree of Stridor is usually criteria needed for diagnosis*
- *Subglottic narrowing "Steeple sign" is seen in AP neck view*

102 **Common manifestation of whooping cough:**

a. Pallor
b. Icterus
c. Sub - conjunctival hemorrhage
d. clubbing

Whooping Cough (Pertusis)

- *Cough of 1oo days*
- *Caused by Bordetella pertussis*
- *3 stages: Catarrhal (most infectious), Paroxysmal cough (with characterstic whoop), Convalescent phase*
- ***Complications:*** ***Pneumonia,*** *bronchiectasis, pneumothorax,* ***Subcutaneous Emphysema,*** *hernia, rectal prolapse,* ***Subconjunctival Hemorrhage,*** *convulsion, encephalopathy, IC hemorrhage*
- ***Diagnosis:*** *TLC increased with absolute lymphocytosis (>10000). Inoculate in Bordet Gengou medium*
- ***T/t:*** *Erythromycin is preferred antibiotic*

103. **Kopliks spot is present in**

a. Measles
b. Mumps
c. Rubella
d. Erythema infectiosum

104. **Herpes zoster is caused by**

a. HTLV - 1 & 2
b. Epstein barr virus
c. HHV - 6
d. Reactivation of latent varicella infection

105 **In rickets, which of the following is true.**

	Calcium	Phosphorus	PTH
a.	↑	↑	N
b.	↓	↓	↑
c.	↑	↓	N
d.	N	N	↑

Biochemistry of metabolic bone diseases

Diseases/ serum level of	*Ca^{2+}*	*PO_4^{3-}*	*ALP*	*PTH*
Osteoporosis	***Normal***	***Normal***	***Normal***	***Normal***
Rickets*/ Osteomalacia	*N or Low*	*Low*	***High***	***High***
Primary hyper-parathyroidism	*High*	***Low***	*High*	*High*
Paget's disease	*Normal*	*Normal*	***High***	*Normal*

**Phosphatemic type of rickets has normal PTH & calcium*

106 **In ORS the function of glucose is to**

a. Increase Na^+ absorption by co-transport
b. Increase Na+K+ pump activity
c. Increase osmolality of ORS
d. Give sweet taste to ORS

- *Oral rehydration is only possible if glucose is added to the salts because there is absorption of sodium ions along with glucose due to glucose facilated sodium ion absorption (co-transport)*

100.b Send cord blood..	101.a Inspiratory stridor	102.c Sub-conjunctival hemorrhage
103.a Measles	104.d Reactivation..	105.b Ca↓ PO4↓
106.a Increase Na+ absorption by co-transport	107.c Cystic hygroma	108.c Staphylococcus aureus

107. A 5 years old child presented with mass in the posterior wall of neck, which increase during crying. On examination swelling was partially compressible and brilliantly transilluminant?

a. Branchial cyst
b. Laryngocele
c. Cystic hygroma
d. Lipoma.

Cystic Hygroma

- *Also k/as cavernous hemangioma/ lymphangioma/ hydrocoele of neck.*
- *It is lymphatic malformation*
- *Benign cystic swelling, multilocular, multicystic.*
- *No malignant potential.*
- *Believed to originate from sequestration of lymphatic tissue from lymphatic sacs which fail to communicate with remainder of the lymphatic or venous system. Afterwards these sequestered lymphatic tissues dilate leading to formation of cystic swelling.*
- *50-65% appears at birth,*
- *Location: M/c in the posterior triangle of the neck (75%) & axilla (20%), other sites are mediastinum, pelvic retroperitoneum.*
- *Very large hygromas may result in obstructed labor.*
- *Majority are asymptomatic*
- *Brilliantly transilluminant, usually multilocular.*
- *Cyst contains clear lymph and is lined by single layer of epithelium / endothelium (i.e., non-stratified)*

108. Which is the mostcommon organism in acute osteomyelitis?

a. Streptococcus pneumonia
b. Haemophilus influenza
c. Staphylococcus aureus
d. Klebsiella.

- *The most common organism causing acute osteomyelitis in all age group is Staphylococcal aureus. The most common site is the metaphysis of the long bones in the children (lower end femur>upper end tibia). In adults thoracolumbar spine is the common site.*

ANSWERS

100.b Send cord blood..	101.a Inspiratory stridor	102.c Sub-conjunctival hemorrhage
103.a Measles	104.d Reactivation..	105.b Ca↓ PO4↓
106.a Increase Na+ absorption by co-transport	107.c Cystic hygroma	108.c Staphylococcus aureus
109.b 5 days	110.a Torsion of pedicle	

Gynae/Obs

109. IUCD used as emergency contraceptive for maxm of ?

a. 3 days b. 5 days
c. 7 days d. 9 days

Emergency Contraceptives method:

- *Mechanical(IUD)*
- *Hormonal*

Mechanical(IUD)

- *IUD's introduced postcoitally can prevent pregnancy very successfully.(failure rate=0.1 %)*
- *IUDs can be used postcoitally up to 5 days following sexual exposure. Thus this method can be used even after 48h more delay than the hormonal methods.*

Hormonal:

- *Levonorgestrel (E. Pills) 0.75 mg, two doses given at 12hours interval, is very successful and without any side effects.*
- *The two tablets (1.50 mg) can be taken as a single dose also.*
- *The first dose should be taken within 72 hour.*

110. Most common complication of dermoid cyst is:

a. Torsion of pedicle b. Rupture
c. Infection d. Hemorrhage

Dermoid cyst:

- *Most common benign tumor of ovary in the reproductive age group*
- *Most common neoplasm diagnosed during pregnancy*
- *Most common germ cell tumor.*
- *It is the commonest tumor to undergo torsion.*
- *Complication of ovarian neoplasm:*
- *Torsion of the pedicle (axial rotation) → (Management include immediate surgery-→ Detorsion and cystectomy preserving the ovary)*
- *Intracystic hemorrhage (M/C with serous cystadenoma)*

Infection

- *Rupture (MC with corpus luteum cyst)*
- *Pseudomyxoma peritonei (MC with mucinous cystadenoma)*
- *Malignancy(Risk of malignancy maximum-40% in serous cystadenoma, Least in dermoid cyst)*

111. Common tool used for monitoring of labour in ward is?

a. CTG b. Partograph
c. Fetal doppler d. None

- *Partograph is a composite graphical record of key data (maternal and fetal) during labor, entered against time on a singlesheet of paper.*

Advantages of a partograph:

- *A single sheet of paper can provide details of necessary information ata glance*
- *No need to record labor events repeatedly*
- *It can predict deviation from normal progress of labor early. So appropriate steps could be taken in time*
- *It facilitates handover procedure*
- *Introduction of partograph in the management of labor (WHO 1994) has reduced the incidence of prolonged labor and cesarean section rate. There is improvement in maternal morbidity, perinatal morbidity and mortality*

112. Presenting part in vertex presentation is ?

a. Vertex b. Occiput
c. Brow d. Mentum

113. Which of the following is present in 2nd trimester?

a. lightening
b. Braxton - hicks contraction
c. Increased frequency of micturition
d. Morning sickness

First trimester:

- *Morning sickness*
- *Increased frequency of micturition.(8-12th week)*
- *Breast discomfort*
- *Fatigue*

Second trimester:

- *"Quickening" (feeling of life) denotes the perception of active fetal movements by the women*
- *Braxton-Hicks contractions are evident*
- *Palpation of fetal parts*

114. A middle aged woman came to OPD with C/o not able to conceive for 3 years, even after regular unprotective sexual intercourse. Which of the following is not responsible ?

a. PCOS
b. Endometriosis
c. Sub - serosal fibroids
d. PID

Causes of infertility:

ovarian factor:

- *Anovulation*
- *Polycystic ovarian syndrome*

Tubal factor:

- *Infection*
- *Obstruction*
- *Loss of cilia*
- *Peritoneal factor: Endometriosis*

Uterine factor:

- *Hypoplasia*
- *Fibroids Uterus (Sub-mucosal fibroid not sub serosal)*
- *Endometritis*
- *Synechiae*

Vaginal factor:

- *Atresia*
- *Septum*
- *Vaginitis*

115. Sequence of development of puberty in girls?

a. Thelarche- pubarche- Menarche
b. Menarche- Pubarche-Thelarche
c. Pubarche - Menarche- Thelarche
d. Pubarche – Thaelarche- Menarche

Sequence of development of puberty:

- ***B**=Breast budding (Thelarche)*
- ***P**=Development of pubic hair(Pubarche) and axillary hair(Adrenarche)*
- ***H**=Increase in height or growth spurt*
- ***M**=Menarche*
- ***@BPH in Males***

116. A patient came to OPD with h/o 12 weeks of amenorrhea, PV bleeding for 3 days. O /E, uterus was soft, 16weeks of uterus, USG show snow- storm appearance. Which of the following is best for management?

a. Hospital admission, medical induction with misoprostol
b. Suction evacuation & follow up
c. D & C
d. Hysterectomy

Classical Clinical Features of a Complete Mole:

- *Abnormal vaginal bleeding*
- *Lower abdominal pain*
- *Hyperemesis gravidarum*
- *Features of early onset pre-eclampsia < 20 weeks*

- *Uterus > dates (50%)*
- *Absent fetal parts and FHS*
- *Expulsion of vesicular tissues*
- *Thecalutein cyst of ovaries (25%) > 6 cm*

Hyperthyroidism (rare)

- *Serum hCG> 100,000 mIU/mL*
- *USG: snowstorm appearance*

The principles in the management of H. mole are:

- *Suction evacuation (SE) of the uterus as early as the diagnosis is made.*
- *Supportive therapy: Correction of anemia and infection, if there is any.*
- *Counseling for regular follow-up*

117. Uerine tachysystole is?

a. > 3 uterine contraction in 20 min
b. >6 uterine contraction in 10 min
c. Single contraction lasting more than 20min
d. >10 uterine contraction in 10min

- ***Hyperstimulation**: Contractions > 5 in 10 min time and lasting for at least 2 minutes. Fetal heart rate (FHR) change may or may not be present*
- ***Tachysystole** is the hyperstimulation without FHR changes*
- ***Hyperstimulation syndrome** is the hyperstimulation or tachysystole with FHR abnormalities*

118. Methylergometrine is contraindicated in:

a. APH
b. After suction & evaluation
c. Eclampsia
d. PPH

Prophylactic

(1) Suspected pleural pregnancy: If given accidentally with the delivery of the first baby, the second baby is compromised by the tetanic contractions of the uterus.

(2) Organic cardiac diseases: Results in sudden squeezing of blood from the uterine circulation into the systemic circulation causing overloading of the right heart and failure.

(3) Severe pre-eclampsia and eclampsia: Sudden rise of blood pressure or development of fits (eclampsia).

(4) Rh-negative mother: More risk of feto-maternal micro-transfusion.

Therapeutic:

- *Heart disease or severe hypertensive disorders—because of itvasoconstrictive effect, it may cause transient hypertension or cardiac failure. specially when given intravenously. Oxytocin is a better substitute in such cases.*

119. A case of LSCS came after 7 days for suture removal. Which of the following is true about wound?

a. Wound heals by 2° intention
b. Presence of granulation tissue in wound
c. Wound strengthening occurs by 80%
d. There is increase in Type - IV collagen

120. Neural tube defect is prevented by:

a. Iron
b. Calcium
c. Folic acid
d. Vitamin B-complex

ANSWERS

109.b 5 days	110.a Torsion of pedicle	111.b Partograph
112.b Occiput	113.b Braxton - hicks contraction	114.c Sub-serosal fibroids
115.a Thelarche-pubarche- Menarche	116.b Suction evacuation..	117.b >6 uterine contraction
118.c Eclampsia	119.b Presence of granulation..	120.c Folic acid

Surgery

121. Which of the following sign seen in acute cholecystitis?

a. Ballance sign
b. kehr's sign
c. Murphy's sign
d. Rovsing sign

- ***Ballances' sign:** Seen in about 25% of ruptured spleen. There is a dull note in both the flanks due to haemoperitoneum.*

  The dullness on the right side can be made to shift, but that on the left side remains constant/fixed because the blood in the vicinity of the ruptured spleen gets coagulated soon.
- ***Kehr sign:** This sign identifies the pain elicited in the left shoulder in patients with suspected splenic rupture. The pain (referred pain) experienced by the patient is due to blood in the peritoneal cavity irritating the diaphragm.*
- ***Murphy's sign** (Moynihan's method): This clinical sign is classically described in patients suffering from cholecystitis.*

  It is elicited by asking the patient to breath deeply while exerting moderate pressure with the left hand such that thumb lies over the fundus of the gallbladder. The patient catches his breath as the

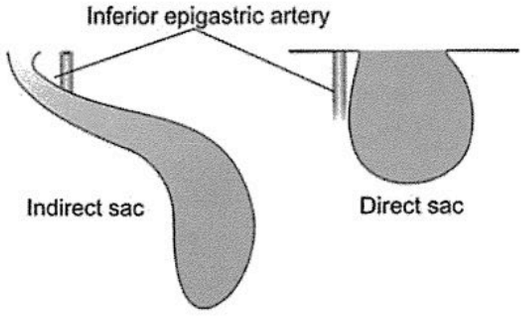
121.c Murphy's sign | 122.a Medial

inflamed gallbladder which is pushed down by the diaphragm gets imposed against the thumb.

- ***Rovsing sign:*** *In acute appendicitis, when left iliac fossa is pressed; pain is felt in right iliac fossa.*

122. Inferior epigastric artery lies_____to Indirect inguinal hernia.

a. Medial b. lateral
c. Above d. Below



123. Parkland's formula for calculation of fluid in Burn:

a. 1ml/kg/% of Burn b. 2ml /kg/ % of Burn
c. 4ml/kg/ %of Burn d. 8ml/kg/% of Burn

124. Breast tumor of size 6 × 3 cm, not involving chest wall or skin, whereas ipsilateral axillary and supraclavicular nodes involved. What is the staging of Breast Ca?

a. $T_4N_1M_0$ b. $T_3N_3M_0$
c. $T_4N_2M_0$ d. $T_4N_0M_0$

TNM Staging of Breast Cancer

Tumour:

- *Tx– Tumour cannot be assessed.*
- *T0 – No evidence of primary.*
- *Tis – Carcinoma in situ (DCIS or LCIS)*
- *T1— Tumour size < 2 cm in greatest diameter*
- *T2 – Size 2-5 cm.*
- *T3 – Size > 5 cm.*
- *T4 – Tumour fi xed to chest wall or skin (T4a—fi xed to chest wall, T4b—fi xed to skin, T4c-T4a + T4b, T4d—infl ammatory carcinoma breast).*

Node:

- *NX – Nodes cannot be assessed.*
- *N0 – No nodes.*
- *N1 – Axillary nodes—ipsilateral, mobile, discrete.*
- *N2 –*
- *N2a – Axillary nodes—ipsilateral fi xed to one another and other structures.*
- *N2b –ipsilateral internal mammary nodes in the absence of clinically palpable axillary nodes.*
- *N3 –*
- *N3a – Spread to ipsilateral infraclavicular lymph nodes with or without axillary nodes.*
- *N3b – Spread to ipsilateral internal mammary nodes and axillary nodes.*
- *N3c – Spread to ipsilateral supraclavicular lymph nodes with/ without axillary or internal mammary nodes.*

Metastasis:

- *MX – Metastases cannot be assessed.*
- *M0 – No metastasis.*
- *M1 – Distant Metastases.*

125. Which of the following is the common site of metastasis of prostate Ca?

a. Lungs b. Liver
c. Bone d. Brain

Common sites of metastasis of different cancers:

- *Breast Cancer : Bone* Lung* Liver. Brain.*
- *Lung Cancer :Brain* Bone. Liver. Lymph nodes. Pancreas.*
- *Colorectal Cancer : Liver* Lymph nodes. Adjacent structures.*
- *Prostate Cancer : Bone (especially spine and legs)* Pelvic nodes.*
- *Melanoma : GI tract. Lymph nodes. Lung. Brain.*
- *Primary Brain Cancer : Central nervous system.*

126. A young adult male, presented in emergency with c/o sudden onset of pain in groin region and vomiting. On elevation of testis intensity pain increases. Most likely diagnosis?

a. Acute epididymo-orchitis
b. Torsion of testis
c. Femoral hernia
d. Testicular tumor

Imp signs in Torsion of Testis:

- ***Prehn sign*** *(Elevation of scrotum increases pain while it relieves pain in epididymo-orchitis),*
- ***Deming's sign*** *(high riding testis → tender lump at Superficial Inguinal Ring),*
- ***Angell's sign*** *(Opp testis lies horizontal).*
- ***Rocher's Sign:****A clinical sign which helps in the differentiation of epididymitis from torsion of the testes. In torsion testes, the epididymis cannot be distinguished from the body the testes, whereas in epididymitis the body of the testes can be felt in the enlarged crescent of epididymis.*

121.c Murphy's sign | 122.a Medial | 123.c 4ml/kg/ %of Burn | 124.b T3N3M0 | 125.c Bone

127 Treatment of choice for mucocoele of GB is :

a. Observation
b. Antibiotics
c. Aspiration of mucus
d. cholecystectomy

128 True about Meckel's diverticulum

a. Remnant of Urachus
b. It consist all layers of gut
c. Supplied by inferior mesenteric artery.
d. Lies at junction of midgut and Hindgut.

Meckel's Diverticulum

- *M/c cause of lower GI bleeding in infants and children.*
- *Remnant of omphalomesenteric duct (or peristent proximal part of VID) which presents as an outpouching of distal ileum.*
- *Lies on the antimesenteric border.*
- *MD is a congenical diverticulum so it has all the 3 layers of intestine (True diverticulum).*
- *Affects infants and children < 2 yrs.*
- *Rule of 2 for MD:*
  - *Affects < 2 yrs*
  - *Affects 2% population*
  - *Usually 2" long, usually 2 ft proximal to ileocecal junction.*

129 DOC after I& D of breast abscess in lactating mother is?

a. Cloxacillin b. Ampicillin
c. Ciprofloxacin d. Gentamicin

130. In the 1st post - op day of thyroid surgery, B.P=90/60, Pulse -120/min, O/E of wound, soakage present. What will you do next?

a. Immediately take to OT
b. Remove the sutures
c. Blood transfusion.
d. Observation

Complications and its management of total thyroidectomy

1. ***Hemorrhage:*** *A tension hematoma deep to cervical fascia develops d/to slipping of ligature on the superior thyroid artery: T/t is immediate removal of sutures of deep fascia*
2. ***Respiratory obstruction:*** *D/to collapse or kinking of the trachea. Most cases are d/to laryngeal oedema, tension hematoma (t/t needle tracheostomy using 12G)*
3. ***RLN paralysis:*** *in 3%, lead to hoarseness of voice.*
4. ***Thyroid insufficiency (20-45%):*** *Occurs usually after 2 years.*
5. ***Parathyorid Insufficiency (0.5%):*** *after 2-5 days of operation usually but delayed upto 2-3 wk with marked hypocalcemia which is asymptomatic. Cause is infarction of parathyroid gland d/to loss of blood supply via inferior thyroid artery.*
6. ***Thyrotoxic crisis (Storm):*** *Seen in patients with uncontrolled hyperthyroidism who undergone thyroidectomy. Presents with hyperpyrexia, dehydration restlessness.*

T/t is I.V. fluids, cooling with ice packs. O_2 diuretics for cardiac failure, Digitoxin for atrial fibrillation, Sedation and hydrocortisone, carbimazole. Lugol's iodine, sodium iodide, propanolol etc.

ANSWERS

121.c Murphy's sign	122.a Medial	123.c 4ml/kg/ %of Burn
124.b T3N3M0	125.c Bone	126.b Torsion of testis
127.d cholecystectomy	128.b all layers of gut	129.a Cloxacillin
130.b Remove the sutures		

Comprehensive Structured question (CSQ)

Q. A.A 50 yrs old male, hypertensive presented with c/o of acute onset of Shortness of Breath that increases on lying flat.

1. What is the most likely diagnosis?

a. Pneumothorax
b. Pulmonary embolism
c. Pulmonary Edema
d. Cardiac Tamponade

2. What will be the finding in X-ray?

a. Prominent upper lobe vein
b. Air between pleura and parenchyma
c. Normal Heart
d. Oligemic Lung field

3. What will be the findings in general Examination?

a. Fever
b. Tachycardia
c. Decreased RR
d. Decreased chest movement

4. What will be the finding in Auscultation?

a. Bronchial breath sound
b. Increased vocal fremitus

1.c Pulmonary Edema	2.a Prominent upper lobe vein	3.b Tachycardia
4.d B/L wheeze and crakles	5.a High flow O_2..	

c. B/L wheeze
d. B/L wheeze and crakles

5. What is the next step in management?
a. High flow O_2 and frusemide
b. Needle Decompression
c. Thrombolysis
d. Chest Tube insertion

Pulmonary Edema:

C/f:

- *Patients present with sudden onset of severe breathlessness, cough, and blood-stained frothy sputum. In severe cases, patients are restless, cyanosed, and fighting for breath.*
- *The patient is unable to lie flat due to orthopnea, will be sitting upright, using accessory muscles of respiration and perspiring profusely*
- *A patient may be in shock with cool peripheral extremities, tachycardia, and pulsusalternans*
- *Examination of the lungs will reveal bilateral crepitations, initially at the bases, which may extend higher up the lung fields.*

Investigations

- *Chest x-ray: may reveal alveolar and interstitial edema, enlarged upper lobe pulmonary veins, cardiomegaly, Kerley B lines*

Acute Treatment of Pulmonary Edema:

- *treat acute precipitating factors (e.g. ischemia, arrhythmias)*
- ***L** – Lasix (furosemide) 40-500 mg IV*
- ***M** – morphine 2-4 mg IV: decreases anxiety and preload (venodilation)*
- ***N** – nitroglycerin: topical/IV/SL*
- ***O** – oxygen: in hypoxemic patients*
- ***P** – positive airway pressure (CPAP/BiPAP): decreases preload and need for ventilation when appropriate*
- ***P** – position: sit patient up with legs hanging down unless patient is hypotensive*

ANSWERS

1.c Pulmonary Edema	2.a Prominent upper lobe vein	3.b Tachycardia
4.d B/L wheeze and crakles	5.a High flow O_2..	

Q. B. 60 years old male, Known case of HTN and DM complains acute onset of weakness of left side of body and slurring of speech. O/E B.P = 170 /120 mm of Hg, Pulse-irregularly irregular.

1. What is the most likely diagnosis
a. Ischemic stroke
b. Hemorrhagic stroke
c. Sub arachnoid Hemorrhage
d. Intra cerebral Hemorrhage

2. What is the most common site of lesion?
a. Putamen b. Internal Capsule
c. Pons d. Medulla

3. What is the investigation of choice?
a. CT scan of head b. MRI of head
c. CT Angiography d. Lumbar puncture

4. What would be the initial management for this case?
a. Airway management
b. Thrombolysis
c. Decreased B.P.
d. Burr Hole

5. Cerebral Ischemia occurs when cerebral Blood flow is below:
a. 10 ml/100gm/min b. 20 ml/100gm/min
c. 40 ml/100gm/min d. 50 ml/100gm/min

- *Most likely Diagnosis: Cardioembolic Ischemic stroke(HTN with Irregularly irregular pulse suggest AF)*

Common site of lesion is Internal capsule

- ***Non-contrast CT head** : to rule out hemmorhage and assess extent of infarct*
- ***Thrombolysis-** rtPA(recombinant tissue plasminogen activator) given within 4.5 h of acute ischemic stroke onset provided there are clinical indications and no contraindications to use*
- *A decrease in cerebral blood flow to **zero** causes death of brain tissue within 4-10 min; values <16-18 mL/ 100 g tissue per minute cause infarction within an hour; and **values < 20 mL/ 100 g tissue per minute cause ischemia** Without infarction unless prolonged for several hours or days.*

ANSWERS

1.a Ischemic stroke	2.b Internal Capsule	3.a CT scan of head
4.b Thrombolysis	5.b 20 ml/100gm/min	

Q.C A 37 year old male presented with fever, Headache, Photophobia, vomiting. On Examination Neck rigidity ⊕, Kernig's sign ⊕. The patient was diagnosed with Meningitis.

Investigation findings

CSF findings → ↓ Glucose, ↑ proein, ↑ Pressure, ↑ Counts

Gram staining → Diplococci suggestive of streptococci pneumonia

MIC > 2 mg/ml for penicillin G.

1. **What will be the drug of choice in this patient?**
   a. Ampicillin b. Ceftriaxone
   c. Vancomycin d. Penicillin G

2. **What is not molecular basis of Resistance?**
   a. β-lactamase
   b. Alteration of Penicillin Binding protein site
   c. Rise in porins
   d. Amino acid modification

3. **If a 80 yrs old patient presents with similar complaints with similar CSF findings.**

   Gram staining: Gram +ve Rods, similar to Diphtheroid

   What will be your drug of choice?
   a. Ampicillin b. Ticarcillin
   c. Penicillin G d. Vancomycin

4. **Which of the following is true about vancomycin?**
   a. Better Oral Bioavailalility
   b. Is a glycopeptide
   c. Binds to Penicillin Bindings Protein
   d. Bacteriostatic

5. **Vancomycin doesn't cover which of the following**
   a. Methicillin resistant Staph aureus
   b. S. epidermidis
   c. Clostridium difficle
   d. Klebsella

Explanation:

1. *case suggest resistance to Penicillin group, so DOC is vancomycin*
2. ***Mechanisms of resistance:***
   - *Penicillinases (beta-lactamases) break lactam ring structure (e.g., staphylococci)*
   - *Structural change in PBPs (e.g., methicillin-resistant Staphylococcus aureus [MRSA], penicillin-resistant pneumococci)*
   - *Change in porin structure (e.g., Pseudomonas)*
3. *Gram positive rods similar to Diptheroidin a 80 year old patient is suggestive of Listeria.*
   DOC for Listeria is Ampicillin
4. *Vancomycin is not absorbed orally. It is a cell wall synthesis inhibitor and all cell wall synthesis inhibitor are bactericidal.*
5. *It is a glycopeptide antibiotic discovered in 1956 as a penicillin substitute which assumed special significance due to efficacy against MRSA, Strep. viridans, Enterococcus and Cl. difficile.*

☞ *Bactericidal action is exerted on gram-positivecocci, Neisseria, Clostridia and diphtheroids.*

☞ *Gram-negative bacilli(e.g: Klebsiella) are inherently non-responsive to vancomycin.*

ANSWERS

1.c Vancomycin	2.d Amino acid modification	3.a Ampicillin	4.b Is a glycopeptide	5.d Klebsella

Q.D.A 6 months old infant presented with c/c of fever, refusal of feed and was lethargic from 2 days. However parents also complains of vacant stare, stiffness of Body and uprolling of eyes.

1. **Which of the following is most likely diagnosis**
   a. Febrile convulsion
   b. Pyogenic meningitis
   c. Brain abscess
   d. Cerebral Malaria

2. **What will be the clinical findings?**
   a. Pulsatile Bulging of Anterior Fontanele
   b. Non-pulsatile Bulging of Anterior Fontanelle
   c. Normal Examination findings
   d. Signs of Meningeal Irritation

3. **What would be most likely organism given that patient is vaccinated according to EPI schedule including H. influenzae type B**
   a. Strep. Pneumoniae
   b. E. coli
   c. Staph aureus
   d. H. influenzae

4. **What is the most common site of lumbar puncture?**
   a. L_2 - L_3 b. L_3 - L_4
   c. L_1 - L_2 d. T_{12} - L_1

5. **What is the treatment of choice?**
   a. Ampicillin
   b. 3rd generation cephalosporin and vancomycin

1.b Pyogenic meningitis	2.a Pulsatile Bulging of Anterior Fontanele	3.a Strep. Pneumoniae
4.a L2 - L3	5.b 3rd generation cephalosporin	

c. Gentamycin
d. Cloxacillin

Clinical features of Bacterial meningitis in Neonate and infants:

- *Vacant stare, Refusal to feed*
- *Poor cry*
- *Alternate irritability and drowsiness*
- *Fever or hypothermia*
- *Persistent vomiting with fever, Tremor or convulsion*

Signs of meningeal irritation are seldom present in first 6 months of life.

Age group	*Organism*
Neonate	*Group B Strep (Stept. Agalactiae)-most common, E.coli(2nd most common)*
Neonate - 3-months	*E.coli, Strep.pneumonia, salmonenalla, staph, listeria*
3 months - 3yr	*S.pneumonia(mc)> N. Meningitidis(2nd mc)> H. influenza(3rd MC)*
>3yr	*S.pneumoniae>N. meningitides*

- *For Empirical therapy, third generation cephalosporin and vancomycin are used.*

ANSWERS

1.b Pyogenic meningitis	2.a Pulsatile Bulging of Anterior Fontanele	3.a Strep. Pneumoniae
4.a L2 - L3	5.b 3rd generation cephalosporin	

Q.E. A 12 year old female presented with puffiness of face, pedal edema. Pt also gives history of "Cola" coloured urine. In past history, patient gives history of sore throat 10 days back

1. **What is the most likely diagnosis**
   a. Acute Glomerulonephritis
   b. Nephrotic Syndrome
   c. Nephritic Syndrome
   d. Acute Renal Failure
2. **What set of investigations would you send?**
   a. Urine R/E and Urine culture
   b. Urine R/E, Electrolyte. BUN, ALSO
   c. Urine R/E, Electrolyte, Complement level
   d. CBC, CRP
3. **What is the most likely causative organism?**
   a. Strep. pneumoniae
   b. Staph. aureus
   c. GroupA Beta Hemolytic streptococci
   d. H. influenzae
4. **Management of. above condition**
   a. Increase fluid intake
   b. Rest, Salt and water restriction, Prednisolone
   c. Decrease fluid and salt intake and antihypertensive
   d. Antibiotics
5. **What is most likely prognosis of given condition?**
   a. Self limiting and reversible in few days
   b. Chronic Renal failure
   c. Acute Renal failure
   d. Persistent Hypertension

- *Nephritic syndrome is characterized by hematuria, proteinuria, hypertension, edema and oliguria.*
- *H/o sorethroat suggest Acute post streptococcal glomerulonephritis, However both were in options. Best Options is Nephritic syndrome.*
- *PSGN appears 1-4 weeks after a streptococcal infections of pharynx or skin(impetigo). It is caused by nephritogenic strains of Group A beta hemolytic streptococci.(Not all serotypes)*
- *The lesions are caused by immune complex deposition and activation of complement-→Complement level decreases.*
- *Prognosis→ More than 95% of affected children eventually recover totally with conservative therapy.*

ANSWERS

1.c Nephritic Syndrome	2.c .. Complement level	3.c GABS
4.c Decrease fluid	5.a Self limiting..	

Q.F. A 15 year old child presented with pain in Right upper leg from last 6 months with presence of discharging sinus. Patient was diagnosed with Chronic osteomyelitis.

1. **What investigation will you send?**
   a. X-ray b. CT scan
   c. MRI d. Bone scan
2. **What will be the clinical finding in bone?**
   a. Thin and Decreased Bone Growth
   b. Rough and Hypertrophic
   c. Spongy Bone
   d. Egg-shell appearance
3. **Sub periosteal new bone formation is known as:**
   a. Involucrum b. Sequestrum
   c. Callus d. Exostosis
4. **Which carcinoma is most likely to develop?**
   a. Adenocarcinoma
   b. Squamous cell carcinoma
   c. Chondrosarcoma
   d. Osteosarcoma
5. **What is the drug of choice?**
   a. Cefazolin b. Cloxacillin
   c. Vancomycin d. Gentamycin

- *Chronic discharging sinus is the commonest symptoms of chronic osteomyelitis. Clinically thickened(hypertrophic) and irregular bone seen.*
- *Lower end of femur is the commonest site.*
- ***X-ray:** shows **sequestrum**(a piece of dead bone, surrounded infected granulation tissue trying to eat) and **involucrum**(dense sclerotic bone surrounding a sequestrum)*
- *Complication of chronic osteomyelitis:*

  Acute exacerbation

  Growth abnormalities

  Pathological fracture

  Joint stiffness

  Sinus tract malignancy-Squamous cell carcinoma.

  Amyloidosis.

ANSWERS		
1.a X-ray	2.b Rough and Hypertrophic	3.a Involucrum
4.b SCC	5.a Cefazolin	

Q.G.A 60 yrs old male with diagnosis of MI was found to have Empyema Gall Bladder.

1. **What is next step in management of Empyema**
   a. Laparoscopic cholecystectomy
   b. Open cholecystectomy
   c. Cholecystostomy ↓ LA
   d. ERCP
2. **Which of the following is true about anatomy of Gall Bladder?**
   a. Right and left Hepatic duct forms CBD
   b. Gall Bladder capacity is 25-30 ml
   c. Cystic artery is a branch of left Hepatic artery
   d. Venous drainage is by portal vein
3. **Which is the most common stone?**
   a. Cholesterol stone
   b. Brown pigment stome
   c. Black pigment stone
   d. Oxalate stone
4. **In case of mucocele of Gall Bladder. Which of the following is true?**
   a. Stone is lodged at neck of Gall bladder and Cystic duct
   b. Stone is lodged at Common Bile Duct
   c. Ascending infection from gut
   d. None
5. **What is the best treatment of Gall Bladder stone?**
   a. Lap Cholecystectomy
   b. Open cholecystectomy
   c. ERCP
   d. Medical management

Empyema Gall Bladder:

- *It is a type of acute cholecystitis wherein the gallbladder is filled with pus.*
- *It also can occur in a pre-existing mucocele of the gall-bladder where it gets infected.*
- *It is commonly observed in impacted stone, diabetic indi-vidual, immunosuppressed people like HIV, long time steroid therapy.*
- *Often initially cholecystostomy is done, with either Foley's or Malecot's catheter kept in situ.*
- *Later after 3-6 weeks, cholecystectomy is done.*

Anatomy of GB

- *It is a pear-shaped structure, 7.5–12 cm long, with a normal capacity of about 25–30 mL.*

Types of stone:

- *Cholesterol stones (Cholesterol solitaire—radiating crystal-line appearance) are 6% common, often solitary.*
- *Mixed stones are 90% common. It contains cholesterol, calcium salts of phosphate carbonate, palmitate, proteins, and are multiple faceted(However, mixed stone were not given in option, so we go for cholesterol stones)*
- *Pigment stonesare small, black or greenish black, multiple. Often they can be sludge like.*

Mucocoele:

- *It is due to obstruction of the cystic duct by a stone in the neck (Hartmann's pouch) of the gallbladder, without any infection or inflammation in the gallbladder. This causes absorption of all bile and secretion of mucous into the gall-bladder allowing gallbladder to distend causing mucoceleof the gallbladder (HydropsQ. of the gallbladder).*
- *Lap Cholecystectomy is the gold standard treatment of cholelithiasis.*

ANSWERS		
1.c Cholecystostomy ↓ LA	2.b Gall Bladder capacity is 25-30 ml	3.a Cholesterol stone
4.a Stone is lodged at neck..	5.a Lap Cholecystectomy	

Q.H.A 80 year old male presented with features of Lower Urinary Tract Symptoms like increased frequency of urination, nocturia, dysuria and was diagnosed of Benign Prostatic Hyperplasia.

1. **Which of the following is true about prostate?**
   a. Lies below Urogenital diaphragm
   b. Supplied by inferior vesical artery
   c. 2 lobes
   d. 4 Zones
2. **On PR examination, Prostate was found to be hard, nodular and asymmetrical. Which investigation will you send next?**

a. Serum PSA b. Testosterone
c. LDH d. α-fetoprotein

3. Gold standard treatment of BPH is
a. TURP
b. Transvesical prostatectomy
c. Perineal Prostatectomy
d. Radical Prostatectomy

4. 5 α-Reductase inhibitor used in BPH is
a. Tamsulosin b. Flaboxate
c. Finasteride d. Prazosin

5. Which of the following is not a d/d of LUTS?
a. Neurogenic Bladder
b. Ureterocele
c. Vesicle stone
d. Urethral stricture

Anatomy of prostate:

- *located abve urogenital diaphragm where anteroinferior surface realated to levator ani.*
- *It has5 lobe: Anterior, Posterior, median(middle or prespermatic) and 2 lateral lobe in which median lobe is common site for BEP due to much glandular tissue.*
- *It has 3 zone: Central zone (internal zone), Transitional zone (site for BEP), Peripheral zone (site for Ca prostate)*
- *Arterial supply by Inferior vesical Artery which is branch of internal iliac artery also from internal pudendal artery and middle rectal artery.*
- *Venous drainage: Vain around it form prostatic venous plexus located between fibrous capsule and prostatic sheath which drain in to internal iliac vein. Plexus is communicate posteriorly with internal vertebral venous plexusthat's why lumbar spine is M/C site of metastasis of Ca postate by hematogenous route.*
- *Lymphatic drainage to internal iliac lymph node, also to sacral lymph node.*

PSA:

- ***Glycoprotein, formed in prostate** and secreted in seminal fluid causes **liquefaction** of seminal coagulum*
- *PSA is prostate specific **not** the Cancer specific*
- *PSA is single test with **highest positive predictive value for Ca Prostate***
- *Normal value of PSA is ≤ 4ng/ml; **Value > 20ng/ml** is **diagnostic of Ca prostate***
- *PSA level is directly related to tumor burden.*

ANSWERS

1.b. Supplied by inferior ..	2.a. Serum PSA	3.a. TURP
4.c. Finasteride	5.a. Neurogenic Bladder	

Q.I. A muitigravida at 38 WOG presented with labour pain for 2 hours, she also gave history of sudden gush of fluid. She delivered 4 kg male baby within ½ hour of hospital arrival. After delivery of placenta she started to bleed O/E Pulse : 150 bpm, BP : 80/60 mm of Hg.

1. Most likely diagnosis is
a. Retained placenta
b. Cervical tear
c. Primary PPH
d. Uuterine Rupture

2. How will you manage in labour room now?
a. Bleed transfosian and FFP
b. Exploration for uterine bleeding
c. Oxytocics, Uterine Massage, Mechanical compression
d. Condom temponade

3. Likely cause of above condition?
a. Cenvical tear
b. Atony of uterus
c. Coagulability
d. Retained placenta

4. What is principle of management of 1° PPH?
a. Active management of 3rd stage of labour
b. Immediately shift to OT
c. Ready for equipment of resuscitation
d. Exploration and Bimanual compression

5. What is predisposing condition for above condition?
a. Multigravida
b. Large baby
c. Precipitate labour
d. Prolonged labour

PPH:

Quantitative definition

- *Conventionally defined as blood loss ≥ 500ml in vaginal delivery and ≥1000 ml in a cesarean delivery*

Clinical definition

- *Any vaginal bleeding after birth of the baby up to the end of puerperium (42 days) which leads to hemodynamic instability (tachycardia, hypotension, features of shock) of the patient is considered as PPH.*
- *Decrease in post-delivery hematocrit level by more than 10% of pre-delivery value is also considered to be PPH.*

I. ***Primary PPH:*** *occurs within first 24 hours of delivery, includes:*
Third stage hemorrhage: before expulsion of placenta
True PPH: after expulsion of placenta

*II. **Secondary PPH:** occurs after 24 hours of delivery upto 6 weeks (42 days)*

Management of Primary PPH in labour room:

Uterine massage

- *Use of uterotonics: Oxytocin, methylergometrine, prostaglandin(misoprostol, carboprost)*
- *Catheterize bladder*
- *Check placenta and membrane for compliteness*
- *If unresponsive to uterotonics*
- *Intra-uterine packing*
- *Balloon/condom tamponade*
- *B-Lynch suture*
- *Uterine and internal iliac artery ligation: stepwise devascularization of uterus*
- *External Aortic Compression Device*
- *Uterine Artery Embolization*
- *Hysterectomy as last resort only if all other measures fail to stop bleeding.*

Causes of PPH:

- ***TONE**: Atony of uterus*
- ***TRAUMA**: Laceration, cervical tear, extended vaginal tear, hematoma, uterine rupture*
- ***TISSUE**: Retained placenta, morbid adherent placenta*
- ***THROMBIN**: Coagulopathies*
- *In above case primary PPH is likely due to atony of uterus due to large size of baby*
- *Principle of management of primary PPH: Active management of third stage of labour*
- *Within 1 minute of delivery of the baby, palpate the abdomen to rule out the presence of an additional baby(s)*
- *Give oxytocin 10 units IM.*
- *Controlled cord traction*
- *Uterine massage*

In above condition PPH is likely due to atony of uterus caused by large size baby

ANSWERS		
1.c. Primary PPH	2.c. Oxytocics	3.b. Atony of uterus
4.a. Active..	5.b. Large baby	

Q.J.40 yrs multigravida presented with complaints of something coming out per vagina. She was diagnosed with UV prolapse

1. **What is the main factor responsible?**
   a. Weakening of pelvic bone supporting uterus
   b. Weakoning of infundibulopelvic ligament
   c. Weakening of cardinal ligament
   d. Weakening of broad ligament
2. **What will you diagnose?**
   a. Good history
   b. USG
   c. X-ray of pelvic bone
   d. Pelvic examination
3. **Which of the following is most important risk factor?**
   a. Extreme of age b. Infertility
   c. Nulliparity d. Old age
4. **What will you immediately do in condition with urinary retention?**
   a. Foley's catheterization
   b. VH with PFR
   c. Suprapubic cystostomy
   d. TAH
5. **What is the managemnt of UV prolapse ?**
   a. Anterior and posterior colpoperineorrhaphy
   b. Fothergill operation if willing for child
   c. Ring possary
   d. VH with BSO

Support of Uterus:

- *Upper support: Comparatively weak, responsible structures are;*
  1. *Endopelvic fascia covering the uterus*
  2. *Round ligaments*
  3. *Broad ligaments with intervening pelvic cellular tissues.*

  Middle support: strongest support

  Mackenrodt's ligament

  Uterosacral ligament

  Pubocervical ligament
- *Lower support: Given by the musculofascial tone of the hollow vagina which is supported by the fascial condensation at the vault and by the pelvic floor at the lower end.*

Diagnosis: Can be done by history and physical examination

- *Complete examination includes inspection, vaginal, rectal, recto-vaginal or even EUA may be required to arrive at a correct diagnosis.*

ANSWERS		
1.c. Weakening of ...	2.d. Pelvic examination	3.d. Old age
4.a. Foley's catheterization	5.d. VH with BSO	

❖❖❖

vaginal hysterectomy and bilateral salpingo-oophorectomy

REFERENCES

CBS/Chaurasia	BD Chaurasia's Human Anatomy, 7/E Vol 1 With CD
CBS/Chaurasia	BD Chaurasia's Human Anatomy, 7/E Vol 2 With CD
CBS/Chaurasia	BD Chaurasia's Human Anatomy, 7/E Vol 3 With CD
CBS/Chaurasia	BD Chaurasia's Handbook of General Anatomy,5/E
CBS/Drakes	Gray's Anatomy for Students,3/E
Moore/Wolter	Clinically oriented Anatomy 7/E
Snell	Clinical Anatomy By Regions9/E
Snell/Wolter	Clinical Neuroanatomy, 7/E
Jaypee/Simbulingan	Essentials of Medical Physiology,7/E-
Current Book Int'/Mahapatra	Essentials of Medical Physiology4/E
Arya /Ak Jain	Text Book of Physiology (Vol.- 1 And 2)
Barrett	Ganong 'S Review of Medical Physiology,26/E
Jaypee	Understanding Medical Physiology, 4/E-Bijlani
Jaypee	Text Book of Medical Physiology-GK Pal 1/E South Asian Edition
Jaypee/Harsamoha n	Textbook of Pathology with Pathology Quick Review and Mcqs,7/E-
Else/Kumar	Robbins and Cotran Pathology Basis of Disease, South Asia Edition
Else/Robbins	Robbins Basic Pathology 9/E
Else/Goljan	Rapid Review Pathology First South Asia Edition
Else/Satyanarayan	Biochemistry,4/E
Murray	Harper's Illustrated Biochemistry,30/E 2015
Lippincotts/Ferrier	Lippincott Illustrative Reviews Biochemistry,6/E With The Point Access Codes
Lehninger	Principle of Biochemistry
Jaypee/Vasudevan	Text Book of Biochemistry for Medical Students, 8/E
Jaypee/Chatterjee	Text Book of Medical Biochemistry,8/E
CBS/Gupta	Text Book of Biochemistry
Jaypee/KD Tripathi	Essentials Of Medical Pharmacology,7/E
Lippincott/	Illustrated Pharmacology, 6/E
Jaypee/Katzung	Katgung Basic And Clinical Pharmacology,13/E
Bannet	Clinical Pharmacology
Shambang	Pharmacology: prep Manual For Undergraduates,3/E
Trevor	Lange Katzung and Trevor's Pharmacology Examination and Board Review,10/E
NCBA/Chakraborty	Text Book of Microbiology,3/E reprint
Anatanarayan And Paniker	Text Book of Microbiology, 9/E reprint
Jawetz	Jawetz Medical Microbiology,26/E
Jaypee/Kumar	Text Book of Microbiology1/E
APC/Baveja	Text Book of Microbiology
Else/Abbas	Basic Immunology, 5/E
Parija	TB of Microbiology And Immunology 21/E
Sastry	Essential of Microbiology
Jaypee/Paniker	Textbook of Medical Parasiotology,7/E
CBS/Chatterjee	Medical Parasiotology
NCBA/Chakraborty	Medical Parasiotology
CBS/Arrora	Medical Parasiotology, 4/E
Jaypee/Singh	Text Book of Human Histology with Coluor Atlas and Practice Guide, 7/E
Else/Young	Weater's Functional Histology, 6/E
Jaypee/Singh	Text Book of Human Osteology, 3/E
Llw/Eroschenko	Difiores Atlas of Human Histology
Jaypee/ Singh	Human Embryology, 10/E
Sadler	Langman's Human Embryology, 13th/E
Else/Moore	The Developing Human: Clinically Oriented Embryology,9/E
Else/Moore	Before We Are Born
K Park	Textbook of Preventive and Social Medicine,23/E
Elsevier/Walker	Davidson's Principle and Practice of Medicine 22/E
MGH/Harrison	Harrison's Principal of Internal Medicine 19/E vol I,II, III
Elsevier	Hutchkinson's Clinical Methods 23/E (Int.Ed. Rs.2023/-)
Elsevier/Churchill	Macleod's Clinical Examination 13/E
Lippincott	Washington Manual of Medical Therapeutics 34/E
Elsevier/Mathew	Medicine: Prep Manual for Undergraduates 4/E
Oxford	Handbook of Clinical Medicine,9/E
Mgh/Harrison	Manual of Medicine (Pocket Size)
Academic/Kundu	Bedside Clinics In Medicine (I) 7/E
Academic/Kundu	Bedsides Clinical In Medicine (Ii) 5/E
Kumar And Clark	Clinical Medicine 9/E
Jaypee/Alagappan	Manual of Practical Medicine,5/E
Educational/G.Pl Acharya	Manual of Medical Emergencies by Gopal Pd. Acharya
Brunicaedi	Schwartz's Principle of Surgery,10/E
CRS	Bailey and Love's Short Practice of Surgery 26/E
Jaypee/SRB	SRB's Manual of Surgery 5/E
S.Das	S.Das-A Manual of Clinical Surgery 11/E
Jaypee/Makhanlal	Makhan Lal Bedside Clinics In Surgery2/E
Oxford	Oxford Hand Book of Clinical Surgery
Lippincott	Washington Manual of Surgery 7/E
CBS/Manipal	Manipal Manual of Surgery 4/E
Elsevier	Sabiston Textbook of Surgery,19/E
CBS/OP Ghai	Essential Pediatrics (8th Edition)
CBS/Meherban Singh	Pediatric Clinical Methods 5/E (New)
CBS/Pitush Gupta	Clinical Methods in Pediatrics 3/E
Cunningham	Williams Obstetrics,24/E
Jaypee/D.C Dutta	Textbook of Obstetrics 8/E
Else/Daftary	Dafter ; Manual of Obstetrics 3/E
Schorge, Hoffman	Williaims Gynaecology
Jaypee/Malhotra	Jeffcoate's Principle of Gynaecology, 8/E
Jaypee/D.C Duta	Text Book of Gynecology 7/E

Elsevier/Shaw	Text Book of Gynecology 15th Editon
Jaypee/ Maheshwory	Essential of Orthopedics 5/E
Jaypee/John Ebnizer	Text Book of Orthopedics(with Free Clinical Examination Methods in Orthopedics)
Elsevier/Dhingra	Disease of Ear Nose and Throat, 6/E
Jaypee/Shreevastav	An Illustrated T/B of Ent by Srivasthav, 2/E
Jaypee/Bansal	Disease of Ear, Nose And Throat, 2/E
Jaypee/Maqboll	Textbook of Ear, Nose and Throat Diseases,12/E
Jaypee/A.K Khurana	Comprehensive Ophthalmology (Free Booklet: Review of Ophthalmology), 6/E
Jaypee/Renu Jogi	Basic Ophthalmology, 4/E
Elsevier/Sihota & Tandon	Parson's Disease of Eye, 22/E
Elsevier/Neena Khanna	Illustrated Synopsis of Dermatology and Sexually Transmitted Diseases, 4/E
Jaypee/Sehgal	Textbook of Clinical Dermatology,5/E
Elsevier/Krishna Vij	Textbook of Forensic Medicine and Toxicology: Principles and Practice, 6/E
Jaypee/Biswas	Review of Forensic Medicine and Toxicology, 3/E
Jaypee/Rao	Textbook of Forensic Medicine and Toxicology, 2/E
Jaypee/Reddy	The Essentials of Forensic Medicine and Toxicology, 33/E
NCBA/Apurba Nandy	Principles Of Forensic Medicine Including Toxicology,3/E
Ajay Yadav	The Short Textbook of Anesthesia
Elsevier/Malamed	Handbook of Local Anesthesia, 6E
Miller	Basic of Anesthesia, 8/E
Butterworth/Morgan and Mikhain's	Clinical Anesthesiology,5/E
Elsevier/Churchill	Chest X-Ray Made Easy 3/E Churchill's/Jonathan Corne ...
Lippincott	The Washington Manual of Critical Care,2/E
Jaypee/Luthra	ECG Made Easy Luthra,5/E
Elsevier/Churchill	The ECG Made Easy 8/E Hampton
Elsevier/Sutton	Radiology and Imaging for Medical Students, 7/E
Sarad Chandra	Sarad Chandra Review of Pgmee 3 Vols. Set
CBS/Agrawal	ROAMS:Review of All Medical Sub-13/E 016
Mudit Khanna	All India Pgmee Mudit Khanna Vol 1
Mudit Khanna	All India Pgmee Mudit Khanna Vol 2
Chaudhary	PGI Chandigarh Vol-1 6/E:may 2015-2011
Chaudhary	PGI Chandigarh, Post Graduate Med Vol-2
JIPMER	JIPMER 20 Authors Last 10 Yrs Ques Ans
Kumar	Target Aiims-JIPMER-Kumar
Pritesh	Aiims Essence 2015-2011 2/E 2016-Pritesh
Amit Aashish	Review of Aiims Vol 1 & 2-13/E 2016
Amit Aashish	Review of Aiims Vol-2 12/E 2015
Amit Aashish	Review of Aiims Vol-3 12/E 2015
Tripathi	Tripathi Review of Postgrad, Vol-2
Tripathi	Tripathi Review of Postgrad Med,Vol3
Tripathi	Tripathi Review of Postgrad, Med Vol-1
Hassan	Platinum Notes Vol-1 (5/E)-Preclinical
Hassan	Platinum Notes Vol-2 (5/E)-Medical Scien
Hassan	Platinum Notes Vol-3 (5/E)-Surgical Scie
Arora	Triple A Vol I For Neet,1E 2014-Sakshi
Arora	Triple A Vol-2 For Neet,1/E 2015-Sakshi
Ramgopal	Sure Success Magic-9/E-Ramgopal B.
Kamal Kv	Self Ass & Rev of FMGE/MCI Screening Xam
Mc Grawhill	First Aid For USMLE Step-1 2016 26/E
Mudit Khanna	Self Assessment & Rev of Med (A&B)-Mudit
Tripathi/Gupta	Medicine For Pgmee Vol-1,Tripathi &Gupta
Tripathi/Gupta	Medicine For Pgmee Vol-2 Tripathi& Gupta
Harrison	Harrison's Principles of Int Med Self ..
Jaypee	Medicine Mcqs For Medical Professional
Raman	Mcq In Medicine- Raman
Marwah	Complete Review of Medicine For NBE 2016
Pritesh Singh	Surgery Essence-4/E 2016-Pritesh Singh
Aashish Amit	Surgery For Pgmee- 9/E 2015-Aashish Amit
Arora	Self Assessment and Review of Pedia-8E, Arrora
Mehra	Review of Pediatric and Neonatal-2/E Mehra
Bhanja	Self Ass. & Rev. Pedia & Neonatal/ Bhanja
Marwah	Complete Review of Pediatrics For NBE 2016
Arora	Self Ass and Review of Gynae-9/E-Sakshi
Arora	Self Ass and Review of Obs-9/E-Sakshi
Shukla	Across -Volume 1-Part B-8/E 2014
Shukla	Across-Volume 1-Part A-8/E 2014
Pulse	Self Assessment and Review of Short Subject
Mehra	Orthopedics Quick Review-4E Apurv Mehra
Arora	Self Ass. and Review of Ent-7E-Sakshi
Seetharam	Self Assessment...of Opthalmo-Seetharam
Jain Rajat	Review of Radiology-(1/E)2016-Jain Rajat
Bhargava	Mcqs in Radiology
Kulkarni	Objective Anesthesia Review
Tripathi	Review of Psychiatry
Samiksha	Basic Science Mcq's Beat
Samiksha	Basic Science Mcq's Mantra
Shukla	Across-Volume 2-Part B-7/E 2015
Shukla	Across-Volume2- Part A-7/E 2015
Phynbian	Phynbian-Physiology,Biochemistry,Anatomy
Govinda	Review of Pathology N Geneti-8/E Govinda
Pulse	Concepts In Pathology/Pulse
Goljan	Rapid Review Pathology-Goljan South Asia
Govinda	Review of Pharmacology-10/E 016-Govinda
Kd Tripathi	Mcqs In Pharmacology,4/E 2016-Kdtripath
Patel	Concepetual Review of Pharmacology 2016
Apurva	Review of Microbio & Immuno 016-Apurv Sa
Chaurasia	Self Assessment and Rev Microbiology N Imm
Rebecca	Self Assess & Review of Biochem- Rebecca
Ranganath	Mcqs In Community Medicine,1/E-Ranganath
Jain	Review of Preventive and Soc Med Jain 8/Ed
Deepak	Self Asses.. of Psm and Biostat-8/E-Deepak
Arvind Arora	Self Ass. and Rev of Basic Subject Vol-1
Arvind Arora	Self Ass. and Rev of Basic Subject Vol-2
Manna	Review of Physiology-1/E(2016)-Manna
MG HILL	Usmle Step 1 First Aid

NMCLE - CHAITRA 2073

1. Which structure in male is not derived from mesonephric duct?

a. Vas deferens b. Epididymis
c. Appendix testis d. Seminal Vesicles

Ans: (c)Appendix testis

- Mesonephric duct (Wolffian duct) develops into male internal genital structures (except prostate) – **S**eminal vesicles, **E**pididymis, **E**jaculatory duct, **D**uctus deferens (**SEED**)
- In females, remnant of mesonephric duct forms Gartner duct
- Paramesonephric duct (Mullerian duct) develops into female internal genital structures – fallopian tubes, uterus, upper portion of vagina (lower portion from urogenital sinus). Male remnant is appendix testis

2. Pure sensory nerve is:

a. Optic nerve b. Occulomotor nerve
c. Trochlear nerve d. Abducent nerve

Ans: (a)Optic nerve

- Olfactory, Optic and Vestibulocochlear nerve are pure sensory nerve. VOO→sensory
- Oculomotor, Trochlear, Abducent, Accessory and Hypoglossal are pure motor nerve
- Trigeminal, Facial, Glossopharyngeal and Vagus are Mixed nerve. FGTV→mix

3. Remnant of umbilical vein is:

a. Urachus b. Ligamentum venosum
c. Ligamentum teres d. Ligamentum arteriosum

Ans: (c)Ligamentum teres

- Fetal postnatal derivatives
- Allantois → Urachus: Median umbilical ligament (Urachus is the part of allantoic duct between bladder and umbilicus)
- Ductus arteriosus: Ligamentum arteriosum
- Ductus venosus: Ligamentum venosum
- Foramen ovale: Fossa ovalis
- Notochord: Nucleus pulposus
- Umbilical arteries: Medial umbilical ligaments
- Umbilical veins: Ligamentum teres hepatis (round ligament- which is contained in falciform ligament)

4. Dangerous layer of scalp is:

a. Subcutaneous layer
b. Superficial fascia
c. Skin
d. Subgaleal layer

Ans: (d)Subgaleal layer

- **Layers of scalp from outside to inside is:**
  - Skin
  - Connective tissue (Superficial fascia)
  - Aponeurosis
  - Loose areolar tissue
  - Pericranium (periosteum)
- The most danger layer of scalp is Subaponeurotic or subgaleal space (loose areolar tissue).

5. Distal small intestine is identified by:

a. Lymphatics aggregate in submucosa
b. No perineal covering
c. No mucosal folds
d. Muscle form 3 bands

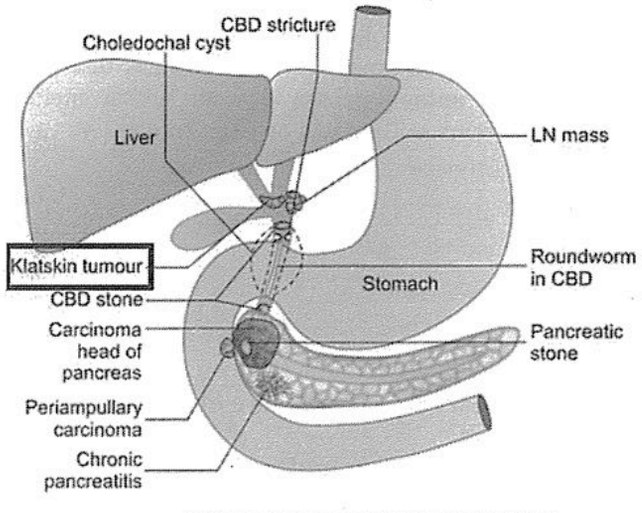
Ans: (a) Lymphatics aggregate in submucosa

- Duodenum contains brunner glands which discharges alkaline secretion.
- Jejunum contains villi, well developed plica and crypts
- Distal small intestine i.e., Ileum is identified by small lymphatics aggregate in submucosa called Peyer's patches that extends upto mucosa layer. M cells are found over lymphatic nodules and peyer's patches.
- Large intestine lacks villi and crypts.

6. Klatskin tumor is present at:

a. Confluence of bile duct
b. Intrahepatic ducts
c. Pancreatic ducts
d. Ampulla

Ans: (a) Confluence of bile duct



Different causes of obstructive jaundice (surgical jaundice).

7. Majority of blood supply to testis is from:

a. Internal spermatic artery
b. External spermatic artery
c. Pudendal artery
d. Hypogastric artery

Ans: (a) Internal spermatic artery

☞ Blood supply of testis:
The testicular artery is a branch of the abdominal aorta
The testicular vein emerge from the testis and the epididymis as a venous network, the pampiniform plexus. This becomes reduced to a single vein as it ascends through the inguinal canal. The right testicular vein drains into the inferior venacava, and the left vein joins the left renal vein.

Physiology

8. Artery of sudden death is:

a. Right coronary artery
b. Left coronary artery
c. Anterior interseptal artery
d. Posterior interseptal artery

Ans: (a) Right coronary artery

☞ The right coronary artery is the artery of sudden death as it supplies both sinuatrial and atrioventricular nodes. Block of RCA may thus lead to sudden death in MI.

9. Anion gap is due to:

a. Differential distribution of ions across the cell membrane
b. Faulty calculation
c. Unmeasured anions in plasma
d. Unmeasured cations

Ans: (c) Unmeasured anions in plasma

☞ Anion gap is measured as $Na^+ - (Cl^- + HCO_3^-)$ which is normally 10-12 mmol/L. However in reality there is no anion gap. The measured anion gap is due to the unmeasured anions in the plasma which includes anionic proteins, sulfate and organic anions.

10. S2 is indicative of:

a. Start of atrial systole
b. Start of ventricular systole
c. Start of diastole
d. Ventricular failure

Ans: (c) Start of diastole

☞ **S1 (First Heart Sound):** Closure of AV valves (mitral and tricuspid)
☞ **S2 (Second Heart Sound):** Closure of Semilunar valves (aortic and pulmonary)
☞ **S3 (Third Heart Sound):** Because of rapid passive ventricular filling (due to volume overload)
☞ **S4 (Fourth Heart Sound):** Because of atrial kick against stiffened ventricles (due to pressure overload)
☞ During the start of diastole, back flow of blood from aorta and pulmonary veins to the ventricles causes semilunar valves to close which is responsible for second heart sound.

11. A patient who had RTA and blood loss has BP of 90/60 mm Hg. In response to blood loss, which is activated?

a. Sympathetic nervous system
b. Parasympathetic system
c. Pulmonary vasoconstriction
d. Vagal stimulation

Ans: (a) Sympathetic nervous system

☞ In response to blood loss, in the bid to increase HR and thus cardiac output sympathetic nervous system is activated.

12. Glucose is absorbed in:

a. PCT b. DCT
c. CT d. Loop of henle

Ans: (a) PCT

☞ Almost all of the glucose and amino acids are absorbed in Proximal convoluted tubules.

13. Which does not increase cardiac output?

a. Pregnancy b. Excitement
c. Exercise d. Obesity

Ans: (d) Obesity

☞ In pregnancy, exercise and excitement cardiac output increases

14. pH of blood is

a. More in arteries than in veins
b. More in veins than in arteries
c. Same in arteries and veins
d. Variable

Ans: (a) More in arteries than in veins

☞ Carbondioxide content of vein is more than arteries. Hence the venous blood is more acidic and have lower pH than arteries

Pharmacology

15. Atropine has longest lasting anticholinergic action in:

a. Eye b. Heart
c. Muscles d. Urinary bladder

Ans: (a) Eye

☞ Atropine effects in order of increasing dose:
- Decreased secretions (salivary, bronchiolar, sweat)
- Mydriasis and Cycloplegia
- Hyperthermia (with resulting vasodilation)
- Tachycardia

- Sedation
- Urinary retention and constipation

Behavioral: excitation and hallucinations

Clinical uses and/or characteristics

☞ Antispasmodics, antisecretory, management of AchE inhibitor OD, antidiarrhoeal, ophthalmology (but long action).

16. ART that can be used with rifampicin ATT is:

a. Ritonavir b. Booster ritonavir
c. Efavirenz d. Nevirapine

Ans: (c) Efavirenz

☞ As a potent inducer of the hepatic cytochrome P450 system, rifampin can decrease the half-life of some drugs, such as digoxin, warfarin, phenytoin, prednisone, cyclosporine, methadone, oral contraceptives, clarithromycin, azole antifungal agents, quinidine, antiretroviral protease inhibitors, and non-nucleoside reverse transcriptase inhibitors.

17. Penicillin acts by inhibiting synthesis of:

a. Cell wall b. Protein
c. RNA d. DNA

Ans: (a) Cell wall

☞ Penicillin acts by inhibiting cell wall synthesis via inhibiting peptidoglycan cross linking. Peptidoglycan cross linking is also inhibited by cephalosporins, carbapenems, and monobactams, while peptidoglycan synthesis is inhibited by Vancomycin and bacitracin.

18. Therapeutic index is marker of:

a. Safety b. Efficacy
c. Potency d. Lethal dose

Ans: (a) Safety

☞ Therapeutic index is the important clinical tool for measuring the dose-related toxicity of a drug, and a measure of overall drug safety.
☞ TD50 – toxic drug dose at which 50% of patients experience adverse effects
☞ ED50 – effective drug dose at which 50% of patients experience desired therapeutic effects
☞ Therapeutic index is ratio of TD50 to ED50
☞ High TI drugs- those that achieve therapeutic doses well before causing toxicity and are relatively safe.
☞ Drugs with a low or narrow TI have a smaller dosing margin that separates desired effects from toxicity.
☞ Therapeutic window is a measure of clinical drug effectiveness for a patient.

19. Drug causing gynecomastia is:

a. Spironolactone b. Dapsone
c. Rifampicin d. Cephalosporin

Ans: (a) Spironolactone

☞ Drugs causing gynecomastia:
[@Some Drugs Create Extremely Awesome Knockers]

- Spironolactone
- Digitalis
- Cimetidine
- Estrogen
- Chronic Alcohol abuse
- Ketoconazole

20. Which of the following increases in urine in case of carcinoid syndrome?

a. VMA b. Metanephrine
c. 5HIAA d. ADH

Ans: (c) 5HIAA

☞ **Carcinoid Syndrome:**

- Carcinoid tumors synthesize and secrete high levels of serotonin (5-HT). Increased serotonin leads to systemic vasodilation as well as thickening, contraction and decreased mobility of right sided heart valves. The left sided of the heart is protected by serotonin inactivation by monoamine oxidase in the lungs.
- Carcinoid syndrome is only seen in 5% of carcinoid tumors, which most commonly affect the terminal ileum or appendix. Usually, the tumors are too small to be symptomatic. However, if the tumor is large enough to overwhelm the liver's metabolic capacity, or if it metastasizes to the liver, then serotonin can escape hepatic degradation and enter systemic circulation. Systemic symptoms include abdominal pain, flushing, secretory diarrhoea, and bronchoconstriction leading to wheezing in addition to the Valvular pathology.

☞ **Diagnosis:** Elevated levels of 5-hyroxindoleacetic acid (5-HIAA), a serotonin metabolite, are detected in the urine. CT, MRI, and indium-111 pentetreotide scan can also be used to locate the carcinoid tumor.
☞ **Treatment:** The first line treatment is surgery to remove the tumor. In patients in whom surgery is not an option, a somatostatin analog, octreotide, can decreased serotonin secretion from the tumor.

21. 1-alpha hydroxylase is present in:

a. Liver b. Kidney
c. Skin d. Sunlight

Ans: (b) Kidney

☞ Cholecalciferol is first hydroxylated in the liver to form 25-hydroxycholecalciferol. This is the storage form of vitamin D. It is also the level measured in clinical lab tests.
☞ In the kidney, 25-hydroxycholecalciferol undergoes a second hydroxylation reaction catalyzed by 1-alpha-hydroxylase. The product of this reaction, 1,25-dihydroxycholecalciferol, is the active form of vitamin D, also known as calcitriol. 1-alpha-hydroxylase

activity is upregulated by PTH, leading to increased vitamin D activity.

☞ Overall, PTH, low calcium, and low phosphate increase 1,25-(OH)2 vitamin D formation.

22. Blood report in subclinical hypothyroidism:

a. Raised TSH
b. Raised TSH, T3, T4
c. Raised T3, T4
d. Low TSH

Ans: (a) Raised TSH

☞ In subclinical hypothyroidism T3 and T4 is normal and TSH is high.

23. Emulsification of fat in intestine is due to:

a. Bile salt
b. Cholesterol
c. Vitamin D
d. Vitamin K

Ans: (a) Bile salt

☞ **Bile has two main functions:**

i. Helps to emulsify large fats, thus aiding in their absorption by the small intestine.
ii. Serves as a means of excretion of excess cholesterol, bilirubin, an some medicines. Bile salts and lecithin together increase the solubility of cholesterol several million times.

Pathology

24. A patient had pill rolling tremors, rigidity. On histological examination of his brain, likely finding is:

a. Neurofibrillary tangles
b. Loss of pigmentation in substantia nigra
c. Loss of neurons in caudate nucleus
d. Hirano bodies

Ans: (b) Loss of pigmentation in substantia nigra

☞ **Parkinson's Disease:**

- Clinically defined by TRAPS:Tremor at rest (e.g. Pill rolling), Cogwheel Rigidity, Akinesia/ bradykinesia, Postural instability, Shuffling Gait, Flat affect.
- Arises from any insult that damages basal ganglia, including antipsychotics that are dopamine antagonists, ischemia, chronic carbon monoxide poisoning, Wilson disease, encephalitis.
- Pathology: Lewy body inclusions (eosinophilic with halo, aggregate of alph-synuclein representing damaged neurofilaments) diffusely in cortical neurons with few tangles or plaques
- Depigmentation of the substantia nigra pars compacta (secondary to loss of dopaminergic neurons)

25. A chronic alcoholic and chronic smoker presented with beefy tongue and lethargy. On investigation, his Hb is 8gm% and blood film shows macro-ovalocytes. Most likely diagnosis is:

a. Iron deficiency anemia
b. Anemia of chronic disease
c. Megaloblastic anemia
d. Chronic pancreatitis

Ans: (c) Megaloblastic anemia

☞ **Megaloblastic anemia:**

- Deficiency of Vit B12 or folate leads to delayed DNA replication. Enlargement of erythroid precursors give rise to large RBCs (marcro-ovalocytes).
- Presents with anemia, glossitis, Subacute combined degeneration of cords in vitamin B12 def (not in folate deficiency).
- Peripheral blood smear may show pancytopenia, oval marcocytosis, and hypersegmented neutrophils (>5 lobes); bone marrow shows megaloblastic hyperplasia.
- In folate deficiency, there is decreased serum folate, elevated homocysteine, and normal methylmalonic acid. In contrast, in B12 deficiency, there is decreased serum B12, elevated homocysteine, and increased methylmalonic acid.

26. Histological finding most suggestive of acute appendicitis is:

a. Mucosal ulceration
b. Fecolith in lumen
c. Neutrophil infiltration in muscularis
d. Vessel thrombosis

Ans: (c) Neutrophil infiltration in muscularis

☞ Leucocytosis, pyuria and fecal leucocytes are the most common laboratory findings. Histological finding in acute appendicitis is the neutrophilic infiltration of muscularis mucosa.

27. Pulsatile bone secondaries are seen in carcinoma of:

a. Breast
b. Kidney
c. Prostate
d. Adrenal

Ans: (b) Kidney

☞ **In renal cell carcinoma, metastasis occurs to:**

i. IVC via renal vein (most common), then to lungs (cannon ball secondaries)
ii. Bones (expansile)
iii. Para-aortic lymph nodes

☞ **Pulsatile secondaries are asked in relation to:**

i. Follicular carcinoma Thyroid
ii. Renal cell carcinoma

28. Signet ring cell is seen in:

a. Krukenberg tumor
b. SCC
c. Adenocarcinoma
d. Brenner tumor

Ans: (a) Krukenberg tumor

- Call Exner bodies are seen in Granulosa cell tumor
- Reinke's crystals are seen in Hilus cell tumor
- Signet ring cells are seen in Krukenberg tumor
- Schiller Duval bodies are seen in Endodermal sinus tumor
- Psammoma bodies are seen in Papillary serous tumor
- Meigs syndrome are seen in Fibroma ovary
- Pseudo-meigs syndrome are seen in Brenner cell tumor
- Walthard cell nest are seen in Brenner tumor
- Rokitansky bodies are seen in Teratoma

29. A child has retroperitoneal solid tumor. HPE shows rosette cells. Most likely diagnosis is:

a. Neuroblastoma b. Adenocarcinoma
c. SCC d. Transitional cell carcinoma

Ans: (a) Neuroblastoma

- Neuroblastoma:
  - Age group: < 5 years (most commonly 2 years)
  - Arises from primitive neuroblast (neural crest origin)
  - Abdomen is most common site – Adrenals is most common; paravertebral sympathetic ganglia
  - Abdominal mass is the most common presenation (it is the most common cause of abdominal mass in children)
  - X-ray shows stippled calcification
  - Increased urinary levels of catecholamines and their metabolites VMA and HVA
  - Biopsy is confirmatory. Histology shows Homer-Wright pseudorosettes

Note: Homer-Wright rosettes are seen in medulloblastoma. In retinoblastoma Flexner-Wintersteiner rosettes, flurettes are seen.
- *Evan's staging is done*
- *Surgery is the treatment of choice*

30. Which is a cause of amyloidosis?

a. Hepatitis b. Multiple myeloma
c. DM d. Rheumatoid arthritis

Ans: (b) Multiple myeloma

- **Multiple Myeloma:**
  - Rare before 40 years
  - Monocloncal malignant proliferation of plasma cells.
  - This monoclonal immunoglobulin is called M-protein or paraprotein.
  - Free light chains of monoclonal immunoglobulin excreted in the urine of MM patients are called Bence-Jones protein.
  - Translocation of the chromosome 11 and 14 is the most common cause. Translocation of chromosome 4 and 14 has the worst prognosis.
  - 70% of patients complains of bone pain. Spine is the commonest bone to get involved. Bone pain worsens with the activity.
  - Plasmacytoma on tissue biopsy is the major criteria and Lytic bone lesions is the minor criteria in Durie and Salmon Myeloma diagnostic criteria
  - Myeloma cells contains characteristic inclusion bodies called Russell bodies, Flame cells, Mott cells, Dutcher bodies
  - Serum Hypercalcemia is associated with poor prognosis.
  - Bone scan is not useful in case of MM
  - Primary amyloidosis can occur (AL amyloid)

31. Increased chance of malignancy is seen in:

a. Hyperplastic polyp
b. Tubular polyp
c. Hamartomatous polyp
d. Juvenile polyp

Ans: (b) Tubular polyp

- Tubular, tubulovillous and villous polyp are neoplastic colonic polyps.

Microbiology

32. Sterile pyuria is seen in:

a. TB
b. Acute pyelonephritis
c. Chronic pyelonephritis
d. Gonorrhoea

Ans: (a) TB

- Presence of WBC in urine but appearing sterile by standard culture techniques is called sterile pyuria.

Forensic medicine

33. In post mortem, lividity is fixed by:

a. 1-2 hr b. 5-6 hr
c. 9-12 hr d. 24 hr

Ans: (b) 5-6 hr

- It is bluish purple or purplish red discoloration of skin of dependent part of body after death due to capillovenous distension.
- It usually develops within 4 hours of death and reaches max between 6-12 hours of death. It gets fixed 5-6 hours after death.
- In cholera, it occurs before death.
- Colors in various cases:
- CO poisoning- cherry red color
- HCN poisoning- Bright red color
- Potassium chlorate poisoning- Chocolate color
- Nitrate, Nitrobenzene- Reddish brown
- Hydrogen sulfide- Blue green

34. Post mortem caloricity is seen in:

a. Arsenic poisoning b. Strychnine poisoning
c. OP poisoning d. Lead poisoning

Ans: (b) Strychnine poisoning

- After death, the body begins to cool but in certain conditions heat may be retained or even be increased in first 2 hours after death. This is called postmortem caloricity. Such conditions are:
  i. Sunstroke
  ii. Tetanus
  iii. Strychnine poisoning
  iv. Acute bacterial or viral infections

35. A fetus is found dead in dustbin near hospital. Its CRL is 35 cm. How much is the age?

a. 2weeks b. 4 weeks
c. 7 weeks d. Term

Ans: (c) 7 weeks

- Upto 5th month: Square root of CRL gives the age in lunar month. For eg if 16cm is CRL age would be 4 months
- After 5th month: CRL divided by 5 will give the age in lunar month. For eg if 35 cm is CRL age would be 7 months

36. A man is missing from last 1 year. A skull was found in a near village. How will you confirm identification?

a. Superimposition b. CT scan
c. X-ray d. DNA

Ans: (a) Superimposition

- Superimposition is a method of comparative identification. In this method, skull of a person is compared with the photograph of the deceased person.

37. Identical twins do not have matching

a. DNA b. HLA
c. Fingerprint d. Face

Ans: (c) Fingerprint

- Finger print are absolutely individual. Even identical twins don't have identical finger prints. Loops are the commonest variety of fingerprint.

Community Medicine

38. Most common risk factor for cardiovascular disease worldwide is:

a. Hypertension b. Diabetes
c. Obesity d. Depression

Ans: (a) Hypertension

- Hypertension is the most common risk factor for cardiovascular disease worldwide.

39. Vaccine is not available against:

a. HBV b. HCV
c. HPV d. Rabies

Ans: (b) HCV

- HCV has no vaccines available. Ribavirin and IFN alpha is the only treatment available. Newly FDA approved drug for Hepatitis C virus is Epclusa.

40. HPV strain implicated in carcinoma cervix is:

a. 16 b. 22
c. 21 d. 26

Ans: (a) 16

- HPV strain implicated in carcinoma cervix is 16 and 18.
- Most common strain associated with squamous cell carcinoma is HPV 16
- Most common strain associated with adenocarcinoma is HPV 18
- Most common strain associated with verrucous carcinoma is HPV 6

41. Not useful in decreasing the transmission of the disease:

a. Elimination b. Surveillance
c. Control of disease d. Isolation

Ans: (b) Surveillance

- Surveillance is defined as continuous scrutiny of all aspects of occurrence and spread of disease that are pertinent to effective control. It does not decrease transmission of the disease that are already present.

42. Screening is:

a. Primordial prevention
b. Primary prevention
c. Secondary prevention
d. Tertiary prevention

Ans: (c) Secondary prevention

- Primordial prevention is the prevention of the emergence or development of risk factors in populations in which they have not yet appeared.
- Primary prevention is the action taken prior to onset of disease which removes the possibility that disease will occur. Health promotion, specific protection, immunization and chemoprophylaxis falls under this category
- Secondary prevention is the action halting the progress of disease at early stage and prevents its complication. Early diagnosis and treatment, screening falls under this category
- Tertiary prevention includes disability limitation and rehabilitation

43. Not transmitted by mosquito:

a. P. vivax b. P. falciparum
c. L. donovani d. Wuchereria

Ans: (c) L. donovani

- L. donovani is transmitted by sandfly not by mosquito.

44. Vaccine giving passive immunity is:

a. Live vaccine b. Immunoglobulin
c. Killed vaccine d. Toxoid

Ans: (b) Immunoglobulin

- Live vaccine, killed vaccine and toxoid gives active immunity
- Immunoglobulin gives passive immunity

45. Best screening test for iodine deficiency in endemic region in community level is done in:

a. Urine b. Blood
c. Salt d. Stool

Ans: (a) Urine

- Measurement of urine iodine concentration in school children or pregnant women is the recommended indicator for screening population for iodine deficiency. Measurement of serum thyrotropin (TSH) as an indicator of population iodine deficiency is used only in neonates and is supplementary to UIC screening.

46. False about polio:

a. Killed vaccine is used in epidemics
b. Lower limb involved more than upper limbs
c. Vaccination can cause paralysis
d. Number of paralytic cases in children is 1 in 1000

Ans: (a) Killed vaccine is used in epidemics

- Injectable polio vaccine does not stop transmission of the virus. Oral polio vaccine is used whenever a polio outbreak needs to be contained, even in countries which rely exclusively on IPV for their routine immunization programme. Since OPV also induces herd immunity.

47. Which of the following is live vaccine?

a. MMR b. DPT
c. HiB d. HBV

Ans: (a) MMR

- Diphtheria and Tetanus are toxoids
- Pertusses is whole cell killed vaccine
- HiB is from recombinant DNA technology
- HBV is fragment vaccine
- MMR is live vaccine

48. BMI for obesity is:

a. >30 b. >32.5
c. >31.5 d. >29.5

Ans: (a) >30

- Underweight: <18.5
- Normal range: 18.5-24.99
- Pre obese: 25-29.99
- Obese class I: 30-34.99
- Obese class II: 35-39.99
- Obese class III: greater than or equal to 40

49. Not a risk factor for non-communicable disease:

a. Smoking b. HTN
c. Alcohol d. Physical activity

Ans: (d) Physical activity

50. Concentrated epidemics is:

a. Prevalence >5% in general population
b. Prevalence >1% in specified population, >5% in general population
c. Prevalence >5% in specified population, <1% in general population
d. Prevalence <1% in specified population

Ans: (c) Prevalence >5% in specified population, <1% in general population

- Concentrated epidemics: Disease prevalence is consistently over 5% in at least one define subpopulation but is less than 1% among general population
- Generalised epidemics: Disease prevalence consistently exceeding 1% among general population
- Low level epidemic: Disease prevalence is below 5% in one defined subpopulation and less than 1 % among general population.

51. Population growth rate of Nepal is:

a. 2.52% b. 2.18%
c. 1.74% d. 1.35%

Ans: (d) 1.35%

- According to 2011 census, population growth rate of Nepal is 1.35%
- Total population is 26,494,504
- IMR (per thousand live births) is 46
- Under 5 children mortality (per thousands) is 54
- MMR (per 1 lakh live birth) is 170
- Average life expectancy is 68.8 years
- Total fertility rate is 2.6

Medicine

52. A patient of MR in AF presents with syncope and pulse rate of 50. What is the most likely cause?

a. Incomplete heart block
b. Digoxin toxicity
c. Stroke
d. MI

Ans: (b) Digoxin toxicity

- In Atrial fibrillation or flutter without heart failure, beta blocker is drug of choice
- In Atrial fibrillation or flutter with heart failure, Digoxin is drug of choice
- This patient could be on Digoxin therapy.
- Digoxin Blocks Na-K ATPase resulting in increased intracellular Na which will reduce the activity of Na-Ca exchanger. More calcium remains intracellular which will ultimately improved cardiac contractility leading

to higher cardiac output. Side effects includes, arrhythmias, blurry yellow vision, nausea, vomiting, AV block. Toxicities are highly increased with hypokalemia.

53. Most common organ affected by TB:

a. Lungs b. Stomach
c. Bone d. CNS

Ans: (a) Lungs

☞ TB can virtually affect all the body organ. Lungs is the most commonly involved organ.

54. Massive splenomegaly is not seen in:

a. Portal HTN b. CML
c. Myelofibrosis d. Hepatitis

Ans: (d) Hepatitis

55. A patient with pale stool and jaundice has following lab findings. ALT = 45 IU/L, AST = 34 IU/L, ALP = 1200 IU/L. What is the diagnosis?

a. Hemolytic jaundice
b. Obstructive jaundice
c. Chronic hepatitis
d. Cholelithiasis

Ans: (b) Obstructive jaundice

☞ In obstructive jaundice, alkaline phosphatase is high and there is conjugated hyperbilirubinemia.

56. A patient during examination was found to be HBsAg positive. To find whether the infection is recently acquired, you will send:

a. IgM anti HBc b. IgG anti HBc
c. Anti HBsAg d. Anti HBeAg

Ans: (a) IgM anti HBc

☞ Whenever in a patient, HBsAg is positive it means the patient has active infection. To know whether it is acute, see whether antiHBc IgM is positive.

57. Diagnostic test for pancreatitis

a. Serum amylase b. Serum lipase
c. USG d. CECT abdomen

Ans: (d) CECT abdomen

☞ To diagnose acute pancreatitis 2 of the following 3 most be present:

i. Abdominal pain consistent with acute pancreatitis
ii. Serum lipase or amylase >3 times the normal
ii. Findings of acute pancreatitis on imaging (CECT/MRI)

☞ CECT is the diagnostic modality of choice.

58. A patient presented with breathing difficulty, chest pain on right side. On examination, there is decreased vocal fremitus and decreased breath sound on right side. Trachea is deviated to left. There is dullness on percussion of right chest. Likely cause is:

a. Pleural effusion b. Pneumothorax
c. Pneumonia d. Lung collapse

Ans: (a) Pleural effusion

☞ In Pleural effusion there is decreased vocal fremitus on auscultation, dull on percussion, chest pain and shortness breath as subjective finding and trachea is deviated to opposite side on chest X ray.

59. Which is a feature of lower motor neuron lesion?

a. Spasticity b. Flaccidity
c. Rigidity d. Hyperreflexia

Ans: (b) Flaccidity

☞ Bulk, Tone and Reflexes are increased in UMN lesion and decreased in LMN lesion
☞ Power is decreased in both UMN and LMN lesion
☞ When tone is decreased limbs becomes flaccid.

60. A 70 years old male living alone, diagnosed as acase of DM but not taking insulin has high risk of:

a. DKA b. Hyperosmolar coma
c. Stroke d. Hypoglycemic coma

Ans: (a) DKA

☞ Diabetic Ketoacidosis results from relative or absolute insulin deficiency combined with counter regulatory hormone excess.
☞ The prototypical patient with HHS is an elderly individual with type 2 DM. Relative insulin deficiency and inadequate fluid intake are the underlying causes of HHS.

61. Cryptitis, crypt abscess is seen in:

a. Ulcerative colitis b. Crohn's disease
c. Enteric fever d. TB intestine

Ans: (a) Ulcerative colitis

☞ In case of ulcerative colitis, intense inflammation in the mucosa and submucosa is present with typical features like:

- Multiple crypt abscess
- Sparing of the deeper layers of the colonic wall
- Inflammatory pseudopolyps
- Multiple pin point ulcers
- Increase in substance P containing nerve fibers
- Lymphoid hyperplasia
- Presence of antineutrophil cytoplasmic antibodies with a perinuclear staining pattern
- Decreased goblet cell mucin

62. Most common clinical feature of Rheumatic fever:

a. Arthralgia b. Erythema marginatum
c. Chorea d. Subcutaneous nodule

Ans: (a) Arthralgia

☞ Arthralgia (joint pain without swelling) is the minor criteria under Jones criteria and is the most common feature of rheumatic fever.

63. A patient is on oral antidiabetic since 4 months. To check the compliance, preferred investigation is:

a. HbA1C b. FBS
c. PPBS d. S. albumin

Ans: (a) HbA1C

☞ Glycated hemoglobin/ HbA1C a form of Hemoglobin that is measured primarily to identify 3 month average plasma glucose concentration. Thus to check the compliance of oral hypoglycemic agent HbA1C is the best measure.

64. Best method in field for diagnosis of leishmaniasis:

a. rk39 strip test using blood/serum samples
b. Demonstration of parasite in tissue of relevance by light microscopic examination of the stained specimen, in vitro culture, or animal inoculation
c. Detection of parasite DNA in tissue samples
d. Immunodiagnosis by detection of parasite antigen in tissue, blood, or urine samples, by detection of nonspecific or specific antileishmanial antibodies (immunoglobulin)

Ans: (a) rk39 strip test using blood/serum samples

☞ rk39 strip test is the fastest, reliable and cheapest screening method for field diagnosis of Leishmaniasis.

65. A 17 year old female with coated tongue, fever, pulse rate of 80 has:

a. Measles b. Malaria
c. Dengue fever d. Enteric fever

Ans: (d)Enteric fever

☞ Fever, Headache and Relative Bradycardia, along with vomiting, diarrhoea, splenomegaly and abdominal pain are the most consistent feature of enteric fever. Patient also has coated tongue in case of enteric fever.

Surgery

66. Swelling in submandibular region, pain while eating which disappears after eating is due to:

a. Wharton's duct calculi
b. Stenson's duct calculi
c. Ludwig's angina
d. Tonsillitis

Ans: (a) Wharton's duct calculi

☞ Wharton's duct related to Submandibular gland
☞ Stenson duct related to parotid gland
☞ Bartholin duct related to sublingual gland
☞ Salivary calculus, 80% are submandubular because the gland secretion is viscous, contains more calcium and also its drainage is dependent causing stasis. Secretion from parotid is serous, contains les calcium and so stones are not common.
☞ Submandibular calculi are 80%radioopaque and pain is more during mastication due to stimulation(salivary colic which can be induced by meals, lemon juice etc). Salivary colic is pain induced by obstruction to the outflow of saliva may be ductal stone.

67. False about carcinoma penis:

a. Less in circumcised males
b. Less in HPV infected males
c. Squamous cell ca
d. TNM staging is used as in other tumors

Ans: (b) Less in HPV infected males

☞ **Carcinoma Penis:** Carcinoma penis is commonly squamous cell carcinoma.
☞ **Etiology:**
i. Chronic balanoposthitis,phimosis
ii. Sexually transmitted diseases
iii. Long standing genital warts
iv. Leukoplakia of glans
v. Condyloma acuminata (by human papilloma virus), balanitis xerotica obliterans)
vi. HIV infection -HPV-16
vii. Circumcision during infancy confers total immunity
☞ **Staging of carcinoma penis is by:**
1. TNM staging
2. Jackson's staging

68. Chain of lakes appearance is seen in:

a. Acute pancreatitis
b. Chronic pancreatitis
c. Pancreatic carcinoma
d. Acute hepatitis

Ans: (b) Chronic pancreatitis

☞ In chronic pancreatitis pancreatic duct may show beading or chain of lakes or string of pearls appearance because of alternating stenosis and dilation of the pancreatic duct.

69. True about chronic pancreatitis:

a. Serum calcium may be decreased
b. Serum amylase is normal
c. CECT is not useful
d. Is not associated with gallstones

Ans: (a) Serum calcium may be decreased

☞ **Chronic Pancreatitis:** Chronic pancreatitis is persistent progressive irreversible damage of the pancreas due to chronic inflammation.
☞ Etiology:
1. Alcohol 80%main cause
2. Stones in biliary tree
3. Malnutrition
4. Hyperparathyroidism
5. Hereditary
6. Idiopathic 20%as mutation
7. Trauma
8. Congenital anomaly(pancreatic division)
9. Cystic fibrosis
10. Autoimmune pancreatitis
11. Hyperlipidemia

☞ **Clinical features:**

- Pain in epigastric region,(mallet sign: right knee chest position), diarrhea, loss of weight, steatorrhoea, malabsorption, mild jaundice, mass per abdomen. In early stage rise in serum amylase is seen. CECT is an useful investigation.
- Ranson's prognostic criteria in non-gallstone pancreatitis

An admissionwithin 48 hours:

AGE >55 years	Haematocrit drop >10%
TC > 16,000 /cu mm	BUN rise >5mg%
Blood sugar >200 mg%	PaO_2< 60 mmHG
LDH >700	Serum calcium <8 mg%
AST > 250iu/100ml	Base deficit >4 mEq/L
	Fluid sequestration >6L

70. 23 year female had mobile well circumscribed lump on lower outer quadrant of her left breast. Likely diagnosis is:

a. Fibroadenoma b. Abscess
c. Ductal carcinoma d. Paget's disease

Ans: (a) Fibroadenoma

☞ Fibroadenoma commonly in young female 15-25 year of age. .It presents as a painless swelling in one of the quadrant which is smooth ,firm, non tender ,well localized and move freely within the breast tissues. (mouse in the breast).

☞ Pagets disease is superficial manifestation of an intraductal carcinoma .it mimics eczema of nipple and areola. In this there is hard nodule just underneath the areola which later ulcerates and cause destruction of nipple.

71. A patient had surgery for perforated duodenal ulcer. Biopsy specimen showed curved urease positive bacilli which most likely is:

a. Salmonella b. Shigella
c. H. pylori d. V. cholera

Ans: (c) H. pylori

☞ H.pylori infection is an important etiology for duodenal ulcer(90%).Anterior ulcer perforate commonly, in 80% of cases there is a history of chronic DU , in 20% case it is silent perforation.

☞ Stages of perforation:

1. Stage of chemical peritonitis
2. Stage of reaction
3. Stage of diffuse bacterial peritonitis

☞ H.pylori is gram negative bacilli, flagellated release enzymes like urease that hydrolyses urea so as to release ammonia.

72. False about colon carcinoma:

a. Extent of circumferential spread is important for deciding treatment
b. A well prepared empty colon on colonoscopy always shows carcinoma
c. Spread is mostly in downward direction
d. Duke's stage B involves spread to lymph nodes

Ans: (d)Duke's stage B involves spread to lymph nodes

☞ Carcinoma colon is most commonly adenocarcinoma, sigmoid colon 21% most common site.

☞ Colonoscopy is the most accurate and most complete method for evaluating the entire colon,as it allows to identify of even small polyps (<1cm)

Modified Duke's staging

A: Growth limited to rectal wall
B: Growth extending into extrarectal tissues but no lymph nodes spread.
  B1: invading muscularis musoca
  B2: invading into or through the serosa
C: Lymph node secondaries.
D: Distant spread to liver, lungs, bone , brain.

73. Non Caseating granuloma is seen in:

a. UC b. Crohn's disease
c. Celiac sprue d. TB intestine

Ans: (b) Crohn's disease

☞ UC is an inflammatory condition of rectum and colon of unknown etiology perhaps related to stress, westernized diet, autoimmune factor, familial tendency, allergic factor.

☞ Crohn's disease is a chronic inflammatory disease, primarily involving the small and large intestine, but which can affect other parts of the digestive system as well. Crohn disease causes small scattered shallow crater- like areas (erosions) called aphthous ulcers in the inner surface of the bowel. In more serious cases, deeper and larger ulcers can develop, causing scarring and stiffness and possibly narrowing of the bowel, sometimes leading to obstruction. Deep ulcers can puncture holes in the bowel wall, leading to infection in the abdominal cavity (peritonitis) and in adjacent organs. Crohn disease comes in many forms. Involvement of the large intestine (colon) only is called Crohn colitis or granulomatous colitis, while involvement of the small intestine alone is called Crohn enteritis. The most common part of the small intestine to be affected by Crohn disease is the last portion, called the ileum. Active disease in this area is termed Crohn ileitis. When both the small intestine and the large intestine are involved, the condition is called Crohn enterocolitis (or ileocolitis).

74. Not true about Peyronie's disease:

a. Self-limiting b. Very aggressive
c. Fibrosis d. Seen in penis

Ans: (b) Very aggressive

☞ Peyronie's disease is development of fibrous tissue plaque on the covering of corpus cavernosum and later involving its full extent resulting in induration of corpus. It is slowly progressive disease. Some cases resolve spontaneously. Few require drugs and surgical treatment.

75. False about catabolic phase of trauma patient:

a. Increased lean body mass
b. Decreased body fat
c. Raised total body water
d. Reduced body weight

Ans: (a) Increased lean body mass

☞ Maintenance of the protein content of certain tissues and organs, such as the skin, brain, heart, and liver, is essential for survival. In the catabolic phase of trauma these essential tissues and organs rely on a steady supply of amino acids via the blood to serve as precursors for the synthesis of new proteins to balance the persistent rate of protein breakdown that occurs in all tissues. It has been recognized since the early 1960s that, in the absence of nutrient intake, muscle protein serves as the principal reservoir to replace blood amino acid taken up by other tissues. In the fasting state, blood amino acids serve not only as precursors for the synthesis of proteins but also as precursors for hepatic gluconeogenesis .and thus there is reduction of lean body mass at the time of catabolic state of trauma patients.

76. Deep inguinal ring is defect in:

a. Fascia transversalis
b. Internal oblique
c. External oblique
d. Transversus abdominis

Ans: (a) Fascia transversalis

☞ Superficial inguinal ring is a triangular opening in the external oblique aponeurosis and is 1.25cm above pubic tubercle.
☞ Deep inguinal ring is U shaped condensation of transversalis fascia lies .1.25 above the inguinal ligament midway between the symphysis pubic and the anterosuperior iliac spine.
☞ Inguinal ligament is formed by lower border of external oblique aponeurosis which is thickened and folded backwards on itself, extending from anterosuperior iliac spine to pubic tubercle.
☞ Inguinal canal is an oblique passage in lower part of abdominal wall, 4cm long situated above the medial 1/2 of inguinal ligament, extending from deep inguinal ring to superficial inguinal ring.

77. A man aged 60 yrs h/o IHD and atherosclerosis. He presents with abdominal pain and maroon stools to you at ER. What may be the person suffering from?

a. Acute intestinal obstruction
b. Acute mesenteric ischemia
c. Peritonitis
d. Appenditis

Ans: (b) Acute mesenteric ischemia

☞ In acute mesenteric vessel ischemia pain is out of proportion to the tenderness. Persistent vomiting and bloody diarrhoea is present. It may be due to atherosclerosis or occasionally due to TAO.

ORTHOPAEDICS

78. Most common presentation of multiple myeloma is:

a. back pain
b. increased creatinine
c. bone pain
d. fractures

Ans:(a)back pain

☞ Multiple myeloma is the malignant neoplasm derived from plasma cells. It affects adult above 40 years of age. The common presenting complaint is increasingly severe pain in the lumbar and thoracic spine (back pain).

79. A patient had fracture tibia and later developed pain and swelling in the leg and numbness in the distal part of the leg. He has:

a. compartment syndrome d/t tibia fracture
b. nerve injury d/t tibia fracture
c. ligament injury d/t tibia fracture
d. vessel thrombosis d/t tibia fracture

Ans:(a)compartment syndrome d/t tibia fracture

☞ The limbs contain muscles in compartment enclosed by bone,fascia and interosseous membrane. So a raise in pressure within these compartments due to any reason may jeopardize the blood supply to the muscles and nerve within the compartment,resulting in compartment syndrome.
☞ Causes of compartment syndrome could be:
- > any injury leading to oedema of muscles.
- >fracture haematoma within the compartment.
- > ischemia to the compartment , leading to muscle oedema.

☞ **Symptoms:**
- >excessive pain, not relieved with usual dose of analgesics.
- >stress test: earliest sign of impending compartment syndrome.

☞ **Treatment**
- Preventive: limb elevation,active finger movements
- Definitive: Fasciotomy and Fibulectomy

80. Subluxio erecta is:

a. inferior dislocation of shoulder
b. superior dislocation of shoulder
c. fracture humerus
d. anterior dislocation of shoulder

Ans:(a)inferior dislocation of shoulder

☞ Subluxio erecta or inferior dislocation of shoulder is the rare type of shoulder dislocation where the head

comes to lie in the subglenoid position. Three types of shoulder dislocation are known anterior, posterior and inferior of which anterior is the most common type of dislocation. I n anterior type the head of humerus comes out the glenoid cavity and lies anteriorly. Tt can be further classified into preglenoid, subcoracoid and subclavicular.

81.For a patient with open comminuted fracture of tibia, skin wound >10cm, foot drop with loss of distal pulse; the Anderson's class is:

a. II b. IIIA
c. IIIB d. IIIC

Ans:(d)IIIC

☞ **Gustilo-Anderson classification:**

Grade	Description
I	Open fracture, clean wound, wound <1 cm in length
II	Open fracture, wound > 1 cm but < 10 cm in length without extensive soft-tissue damage, flaps, avulsions
III	Open fracture with extensive soft-tissue laceration (>10 cm^{l}), damage, or loss or an open segmental fracture. This type also includes open fractures caused by farm injuries, fractures requiring vascular repair, or fractures that have been open for 8 hr prior to treatment
IIIA	Type III fracture with adequate periosteal coverage of the fracture bone despite the extensive soft-tissue laceration or damage
IIIB	Type III fracture with extensive soft-tissue loss and periosteal stripping and bone damage. Usually associated with massive contamination. Will often need further soft-tissue coverage procedure (i.e. free or rotational flap)
IIIC	Type III fracture associated with an arterial injury requiring repair, irrespective of degree of soft-tissue injury.

82.New bone formed in chronic osteomyelitis is:

a. sequestrum b. involurcum
c. osteoid d. callus

Ans:(b)involurcum

☞ Chronic osteomyelitis also called chronic pyogenic osteomyelitis. The commonest causative organism is staphylococcus aureus and the commonest site is the lower end of the femur (metaphysis of the long bone). Chronic discharging sinus is the commonest presenting symptom.

☞ Sequestrum is the piece of dead bone, surrounded by infected granulation tissue trying to "eat" the sequestrum away.

☞ Involucrum is the dense sclerotic bone overlying a sequestrum.

☞ Cloacae are the holes present in the involucrum for the pus to drain out.

☞ Osteoid is the unmineraised organic compound of bone in histological picture.

83.Triple arthrodesis foot involves

a. Calcenocuboid, talonavicular and talocalcaneal
b. Tibiotalar, cancenocuboid and talocalcaneal
c. Ankle joint, calceocuboid and talocalcaneal
d. Ankle joint, knee joint

Ans:(a)Calcenocuboid, talonavicular and talocalcaneal

Gynecology and Obstetrics

84.23 year female presents with amenorrhoea, PV bleeding and pain abdomen . Least likely cause is:

a. Fibroid uterus b. Ectopic pregnancy
c. H. mole d. Abortion

Ans:(a)Fibroid uterus

☞ Fibroid is the commonest benign solid tumour of the uterus.

☞ Increased risk are:nulliparity ,obesity,hyperestrogenic state and black women.

☞ Reduced risk: multiparity , smoking.

☞ Symptoms:asymptomatic (majority), menstrual abnormality(menorrhagia,metrorrhagia),dysmenorrhea,dyspareunia,infertility,presuresymptoms, recurrent pregnancy loss (miscarriage, preterm labour), lower abdominal or pelvis pain, abdominal enlargement.

☞ Ectopic pregnancy there is abdominal pain,heavy vaginal bleed and there is often a missed menstrual period so ectopic pregnancy often feels like a normal pregnancy.

☞ H. mole there is nausea and vomiting (severe),p/v bleeding commonest presentation, lower abdominal pain, uterus >dates(50%), expulsion of vesicular tissue.

85.Best time for D &C is :

a. during proliferative stage
b. during secretory phase
c. during bleeding
d during ovulation

Ans:(b) during secretory phase

☞ **Dilation (or dilatation) and curettage** (D&C) refers to the dilation (widening/opening) of the cervix and surgical removal of part of the lining of the uterus and/or contents of the uterus by scraping and scooping (curettage). It is a therapeutic gynaecological procedure as well as the most often used method of first

trimester miscarriage or abortion. In secretory phase as endometrial becomes thickest and uniform as functional layer becomes oedematous as there is increase in progesterone level.

86.None done in Fothergill's operation:

a. D & C
b. Enterocele repair
c. Anterior colporrhaphy
d. Cystocele repair

Ans:(d)Cystocele repair

☞ Fothergill's operation also called as Manchester Repair is an operation for uterine prolapse. It's purpose is to reduce the cystourethrocele, to reposition the uterus within the pelvis. The following are the steps:

1. Preliminary dilation and curettage
2. Amputation of the cervix
3. Plication of the Mackenrodt's ligaments in front of the cervix
4. Anterior colporrhaphy
5. Colpoperineorrhaphy

87.A 75- year old woman presents with urinary incontinence associated with laughter and exercise for the last 3 months. She has a history of oesteoporosis, hypertension and mild osteoarthritis for which she takes acetaminophen, alendronate, calcium carbonate , vitamin D and lisinoril. On examination her vital sign are normal and the gynaecological exam reveals mild atropic baginitis. The cough test reveals leakage of small amounts simultaneously with the cough.

a. stress incontinence
b. overactive bladder
c. mixed incontinence
d. cough induced bladder contractions

Ans:(a) stress incontinence

☞ Stress incontinence is defined, according to the international continence society as involuntary urethral loss of urine when the intravesical pressure exceeds the maximum urethral pressure in the absence of the detrusor activity.

☞ **Risk factors:**

a. developmental weakness of the supporting structure maintaining the bladder neck and proximal urethra in position.
b. childbirth trauma causing damage of the pelvic floor and pubocervical fascia .
c. pregnancy
d. postmenopausal
e. trauma
f. following surgery like anterior colporrhaphy, local repair of VVF or bladder neck surgery.
g. increasing age
h. obesity (BMI> or = 30)

☞ **The clinical presentation are:**

- leakage of urine coincides with stress
- unable to control the escape of urine,once there is urge
- no prior urge to void
- amount is large
- amount small
- patient aware of the urge
- patient is fully aware of it
- urgency and frequency
- micturation -normal

88.Rh negative primi gets FFP/cryoprecipitate transfusion from Rh positive person. Which of the following is true:

a. she should immediately get anti D
b. she does not need anti D
c. such transfusion should not be done
d. transfusion should be from same blood group.

Ans:(b) she does not need anti D

☞ Rh incompatibility is a condition that occurs during pregnancy if a woman has Rh-negative blood and her baby has Rh-positive blood. Rh factor is inherited (passed from parents to children through the genes). Most people are Rh-positive.Blood from fetus can cross into mother's bloodstream, especially during delivery. If mother is Rh-negative and fetus is Rh-positive, mother's body will react to the fetuse's blood as a foreign substance. Mother's immune system then create antibodies (proteins) against the baby's Rh-positive blood. These antibodies usually don't cause problems during a first pregnancy. This is because the baby often is born before many of the antibodies develop. However, the antibodies stay in the mother's body once they have formed. Thus, Rh incompatibility is more likely to cause problems in second or later pregnancies (if the baby is Rh-positive), but could be avoided by the use of Rh immune globulin.

89.True about $MgSO_4$:

a. given for 24 hours after delivery
b. given for 48 hours after last seizure
c. given till toxicity appears
d. respiratory rate need not be monitored

Ans:(a)given for 24 hours after delivery

☞ $MgSO_4$ should be continued for 24 hours after last seizure or delivery which ever is later. The most important factor in continuing the MgSo4 depends on the respiratory rate, deep tendon reflexes and the urine output. Regimens for giving MgSO4 is either PRITCHARD (IM) or ZUSPAN OR SABAI (IV)

90.Increased in menopausal women:

a. FSH
b. LH
c. Estrogen
d. Progesterone

Ans:(a)FSH

☞ Few years prior to menopause, along with depletion of the ovarian follicles, the follicles become resistant to pituitary gonadotropins. As a result, effective folliculogenesis is impaired with diminished estradiol production. There is a significant fall in the level of serum estradiol from 50-300 pg/mL before menopause to 10-20 pg/mL after menopause. This decreasethe negative feedback effect on hypothalamopituitary axis resulting in increase in FSH. The increase in FSH is also due to diminished inhibin.

91.Crowning in breech is when :

a. Bitrochanteric diameter passes pelvic inlet
b. Bitrochnateric diameter passes pubic symphsis
c. Biparietal diameter passes pubic symphsis
d. hen head is out

Ans:(b) Bitrochnateric diameter passes pubic symphsis

☞ Crowning is seen after the internal rotation of the head,further descent occurs until the sub occipital lies underneath the pubic arch. At this stage, the maximum diameter of the head (biparietal diameter) stretches the vulval outlet without any recession of the head even after the contraction is over. This is in case of normal delivery. But in the breech crowning is seen when through Bitrochnateric diameter passes pubic symphsis

92.Amniotic fluid embolism has higher chance of:

a. hypofibrinogenemia
b. pulmonary embolism
c. shock
d. cyanosis

Ans:(b) pulmonary embolism

☞ Amniotic fluid embolism is rare but serious condition that occurs when amniotic fluid that surrounds the baby in the uterus during pregnancy and most likely to occur during delivery, immediately afterward resulting into cardio respiratory collapse and massive bleeding.

93.Anticoagulant of choice in pregnancy is:

a. Warfarin b. Heparin
c. Clopidogrel d. Aspirin

Ans:(b) Heparin

☞ Heparin (unfractionated heparin) or low molecular weight heparin it act by inhibition of action of thrombin, it also enhances the activity of antithrombin III. It is given during pregnancy as it does not cross the placenta so there is no effect seen in fetus but it has some side effect to mother like haemorrhage, urticaria with long term use thrombocytopenia and osteoporosis and osteopenia, hyperkalameia.

☞ warfarin act by interferences with synthesis of vit k dependent factors (II,VII,IX,X). Its side effect is in mother causes haemorrhage and in foetus cause contradi's syndrome (skeletal and facial anomalies), optic atrophy, microcephaly, chondrodysplasia punctata.

94.Investigation of choice for intra -abdominal mass in pregnancy is:

a. CT b. MRI
c. Isotope scan d. X ray

Ans:(b) MRI

☞ MRI is a non-invasive tool in the diagnosis of endometriosis. It can measure the depth of penetration, which is responsible for pelvis pain. MRI is superior to CT in the evaluation of metastasis lymph nodes or recurrent pelvic tumour. MRI can differentiate the different zones of the uterus clearly. It can measure the depth of myometrial penetration of endometrial cancer preoperatively. MRI is found to be safe in pregnancy and is not mutagenic.

95.Narrowest part of fallopian tube is:

a. Interstitial b. Ampulla
c. Isthmus d. Infundibulum

Ans:(a)Interstitial

☞ Interstitial portion is the innermost part of the fallopian tube which traverses the myometrium to open into the endometrial cavity .It is the shortest part of the tube, its length being the thickness of the uterine muscle, about 18mm. It is also the narrowest part, its internal diameter being 1 mm or less.

96.37 weeks primi with uterine contraction for 10 hours, cervix 1 cm dilated and poorly effaced. What is the management?

a. Cesarean section b. Amniotomy
c. Oxytocin drip d. Sedation and wait

Ans:(d)Sedation and wait

Pediatrics

97.Most common cause of neonatal death in nepal is:

a. prematurity b. birth injury
c. malnutrition d. congenital abnormality

Ans:(b) birth injury

98.A boy developed rashes on both the legs. A week later,he developed puffines of the face, weight gain and hematuria. Likely diagnosis is

a. PSGN
b. RPGN
c. Nephrotic syndrome
d. Alport syndrome

Ans:(a)PSGN

☞ Post streptococcal GN involves school age children, more commonly boys and is uncommon below 3 years.

Subclinical episodes are more common than overt disease, especially during epidemics. Patients may have mild proteinuria and microscopic haematuria. The onset is rapid,with puffiness around the eyes and pedal oedema. Urine is coca -colored, hematuria is brief often lasting only a few hours and does not persist beyond 1-2 weeks. While the degree of oligurai usually correlates the disease severity, anuria is uncommon. Hypertension is present in over half the patients, resolves with loss of oedema.

99.A 22 hours old neonate presented with fluctuant swelling on parotid region not crossing suture lines. Likely diagnosis is:

a. Cephalhematoma b. Caput succedaneum
c. Sebaceous cyst d. Scalp abscess

Ans:(a)Cephalhematoma

Cephalhematoma	Caput succedaneum
lesscommon	common
over parietal bones, between skull and periosteum	subcutaneous plane
increasing size for 12-24 hours and then stable	maximum size and firmness at birth
takes 3-6 weeks to resolve	softens progressively from birth andresolves within 2-3 days.
does not cross suture line; has distinct margins	diffuse; crosses suture line
linear skull fracture (5-25%) ; hyperbilirubinemia	not associated

100.False about PSGN:

a. C3 level is normal
b. hematuria
c. fellows streptococcal infection
d. TN is present

Ans:(a)C3 level is normal

- PSGN lab findings:
- Urine shows 1-2+ protein with red cells , and red cell and granular casts. White cells indicate glomerular inflammation and should not be regarded as evidence of UTI.
- ESR is raised.
- Blood urea and creatinine are elevated.
- ASO titre is increased in more than 80% patients.
- The level of C3 is low in 90% patients but normalised by 8-12 weeks.

101.A child has retroperitoneal solid tumor.HPE shows rosette cells .Likely diagnosis is

a. Neuroblastoma b. adenocarcinoma
c. scc d. transitional cell carcinoma

Ans:(a)Neuroblastoma

- Neuroblastoma is the most common intra abdominal and extracranial solid tumour in children. It is a malignant tumour of the autonomic nervous system derived from the neural crest. The gold standard for the diagnosis of Neuroblastoma is examination of the tumour tissue by histopathology and immunohistochemistry.
- Homer Wright rosettes are a type of rosette in which differentiated tumour cells surround the neutrophil. Examples of tumours containing these are neuroblastoma, medulloblastoma, pinealoblastom a, and primitive neuroectodermal tumors of bone. Homer Wright rosettes are considered "pseudo" in the sense that they are not true rosettes. True rosettes are Flexner–Wintersteiner rosette, which contain an empty lumen. Homer Wright rosettes contain abundant fibrillary material. They are named for James Homer Wright.

102.A 2 year old child is brought with seizure and fever. He had similar episode 6 months back. What is the appropriate management:

a. give paracetamol and diazepam and reassure
b. reassurance only
c. give antiepileptic for 3 years
d. immediate lumbar puncture

Ans:(a)give paracetamol and diazepam and reassure

- Febrile seizures are defined as seizures during fever occurring between 6 months and 5 years age in the absence of infection of the central nervous system in a neurologically normal child.
- Prophylaxis of febrile seizure may be continuous or intermittent. Intermittent prophylaxis of feverile convulsions is indicated if 3 or more febrile seizures in 6 months or 6 or more in 1 year, febrile seizures lasting more than 15 min or requiring pharmacological therapy to control seizures.
- Intermittent prophylaxis is currently prescribed during episodes of fever. Oral clobazam is an effective prophylactic and is given for 3 days during fever episodes. Antipyretics, hydrotherapy and meticulous temperature recording should be advocated for all patients. Domiciliary care is also recommended.

103.Most common cause of secondary hypertension in children and adolescent is:

a. Renal vascular disease
b. Renal parenchymal disease
c. Alcohol intake
d. Pheochromocytoma

Ans:(b) Renal parenchymal disease

- Essential (primary) hypertension is the most common form of hypertension in adults is recognised more often in adolescents than in younger children. Systemic hypertension is rare in infants and young children but when present it is usually due to an underlying disease (secondary hypertension).

Approximately 90% of secondary hypertension in children are due to renal or renovascular abnormalities. The major renal causes include chronic glomerulonephritis, reflux or obstructive nephropathy, polycystic or dysplastic renal disease and renovascular hypertension.

104.A child is brought with generalised body swelling, weakness. He is from poor socio-economic background. Diagnosis is:

a. Kwashiorkor
b. Marasmus
c. Nephrotic syndrome
d. Nephritic syndrome

Ans:(a)Kwashiorkor

☞ Malnutrition refers to both under nutrition as well as over nutrition. Sometimes the term mal-nutrition and protein energy malnutrition are used interchangeably with under nutrition.

Clinical finding	Marasmus	Kwashiorkor
occurrence	most common	less common
edema	absent	present
activity	active	apathetic
appetite	good	poor
liver enlargement	absent	present
mortality	less than kwashiorkor	high in early stage
recovery	recover early	slow recovery
infections	less prone	more prone

105.Commonest congenital heart disease:

a. ASD b. VSD
c. TOF d. TOGA

Ans:(b) VSD

☞ **Congenital Heart diseases are of two types**

1. Acyanotic congenital heart disease
   a. ASD (atrial septal defect)
   b. VSD (ventricular septal defect) - most common of all congenital heart disease
   c. DA (patent ductus arteriosus)
2. Cyanotic congenital Heart disease
   a. Tetralogy of fallot
   b. Tricuspid atresia
   c. Ebstein anomaly
   d. Transpositionof great vessels
   e. Total anamalous pulmonary venous connection

106.A child has ARDS with respiratory rate of 35/min, spo2 = 85%. Ventilator setting in ICU is:

a. High FiO2
b. High PEEP
c. Low rate, high tidal volume
d. High tidal volume

Ans:(b) High PEEP

☞ ARDS is defined as pulmonary oedema not originating from the heart. Most common cause is severe pneumonia followed by sepsis .other factor include shock, tissue injury, aspiration, toxins, micro thrombi, intravascular coagulation, uraemia and increased intra cranial pressure.

☞ Clinical features includes , symptoms are les and lungs are clear initially but later on within 6-8 hours ,patient becomes breathless , after 12 hour of insult refectory hypoxia occurs followed by hypercapnia. Radiologically, most lung field are affected with reticular opacities.

☞ Patients should be managed in an intensive care unit with cardio respiratory monitoring and artificial ventilation. Ventilation is achieved by high PEEP or inverse ratio ventilation.

Anesthesia

107.Oxygen consumption in adult:

a. 200 ml/min b. 250 ml/min
c. 300 ml/min d. 350 ml/min

Ans:(b) 250 ml/min

☞ Oxygen consumption in young children is high approximately 7ml/kg/min at birth

☞ Oxygen consumption in adult is 3-4 ml/kg/min. Considering, adult male to be 70 kg, consumption is around 210 to 280 ml/min. On an average taken to be 250 ml/min.

108.A patient of trauma with hyperkalemia and acidosis is planned for emergency laparotomy with rapid sequence induction. The muscle relaxant of choice is:

a. Atracurium b. Rocuronium
c. Succinylcholine d. Vecuronium

Ans:(b) Rocuronium

☞ Rocuronium is the competitive neuromuscular blocking agent for rapid sequence intubation when succinylcholine is contraindicated. Since the patient has hyperkalemia, succinylcholine is contraindicated in this case.

109.Size of ET tube for a 8 year girl is:

a. 4 mm b. 4.5 mm
c. 6.5 mm d. 8 mm

Ans:(c)6.5 mm

Explanation

☞ Deciding the size of Endotracheal tube:

☞ In normal healthy adult male usually internal diameter of 9 mm is used.

☞ In normal healthy adult female usually internal diameter of 8 mm is used.

☞ For prematures: 2.5mm ID

☞ For 0-6months: 3-3.5mm ID

- For6months-1year: 3.5-4mm ID
  For 1-6years: Age(in years)/3 + 3.5
- For >6 years: Age(in years)/4 + 4.5
- Smallest size of tube available is 2.5mm and the largest size is 10.5mm
- For a 8 year old child:8/4 + 4.5 = 6.5 mm

110.Drug of choice for spinal anesthesia for CS in a term primi is:

a. Procaine b. 1% lignocaine
c. 0.5% sensorcaine d. Cocaine

Ans:(c)0.5% sensorcaine

- Sensorcaine is Bupivacaine HCL injection. Bupivacaine is LA of choice for isobaric spinal anesthesia. Amiodarone is the DOC for dysrhythmias due to bupivacaine.

111.During the induction of GA, serious allergic reaction is seen d/t:

a. Opioid b. Muscle relaxant
c. Inducing agent d. Benzodiazepine

Ans:(c)Inducing agent

- Inducing agent causes wide ranges of allergic reaction from simple pruritic rash to angioneurotic edema during induction.

112.Compression to breath ratio in CPR on children is:

a. 5:1 b. 10:2
c. 15:2 d. 30:2

Ans:(c)15:2

- Compression to breath ratio in CPR as a part of BLS in adult is 30:2, and in children is 15:2

113.A patient underwent surgery for gastric carcinoma. For postoperative pain management, which is preferred?

a. Pethidine and phenargon
b. IM ketorolac
c. Epidural bupivacaine
d. IM tramadol

Ans:(c)Epidural bupivacaine

- After major operation, Epidural bupivacaine is the best method for post operative pain management.

114.In a case of submandibular swelling undergoing surgery, first preop consideration should be:

a. Securing airway b. Anxiety management
c. Preop antibiotic d. Analgesics

Ans:(a)Securing airway

- Securing airways should be the first preop consideration during any of ENT operation.

Ophthalmology

眼前房积脓hypopyon

115.Hypopyon is not a feature of:

a. Scleritis b. Corneal ulcer
c. Uveitis d. Endophthalmitis

Ans:(a)Scleritis

- In case of anterior uveitis (iridocyclitis) in the anterior chamber signs aqueous cells aqueous flare, hypopyon, hyphaema, changes in depth and shape of anterior chamber, changes in the angle of anterior chamber are observed.
- In Endophthalmitis anterior chamber also shows hypopyon; soon it becomes full of pus.
- In case of corneal ulcer during the stage of active ulceration, exudation enter into the anterior chamber from the vessels of iris and cilary body may lead to formation of hypopyon.

116.Most common cause of scleritis is:

a. DM b. Rheumatoid arthritis
c. HTN d. SLE

Ans:(b) Rheumatoid arthritis

- Scleritis refer to chronic inflammation of the sclera proper etiology are
  1. autoimmune collagen disorder ,especially rheumatoid arthritis
  2. metabolic disorders like gout and thyrotoxicosis
  3. someinfections particularly herpes zoster ophthalmicus, chronic staphylococcal and streptococcal infection.
  4. granulomatous diseases
  5. surgically induced scleritis
  6. idiopathic

117.Miotic is used in:

a. Acute open angle glaucoma
b. Uveitis
c. Fundoscopy
d. Sympathetic ophthalmitis

Ans:(a)Acute open angle glaucoma

- In open angle glaucoma the miotics reduce the intraocular pressure by enhancing the aqueous outflow facility. This is achieved by changes in the trabecular meshwork produce by a pull exerted on the scleral spur by contraction of the longitudinal fibers of cillary muscles.

118.Immediate treatment is required for:

a. Congenital U/L anterior polar cataract
b. Congenital B/L anterior polar cataract
c. Congenital U/L nuclear cataract
d. Congenital B/L nuclear cataract

Ans:(a)Congenital U/L anterior polar cataract

- Congenital U/L anterior polar cataract should preferly be removed as early as possible (within days) after birth with optical correction in the first few weeks. However, it must be in mind that visual prognosis in most of the unilateral cases is very poor even after timely operation, because correction of aphakia and prevention of amblyopia in infants is an uphill task.

119. Most common eyelid tumor is:

a. Basal cell carcinoma
b. SCC
c. Melanoma
d. Adenocarcinoma

Ans:(a)Basal cell carcinoma

☞ Basal cell carcinoma is the commonest malignant tumor of the lids (90%) usually seen in elderly people. It is locally malignant.

120. Treatment of choice for myopia:

a. Spectacles, contact lens, IOL
b. Spectacles, contact lens, keratoplasty
c. Spectacles, contact lens, LASIK
d. Spectaclesm contact lens

Ans:(c)Spectacles, contact lens, LASIK

☞ The treatment of myopia are:

1. Optical treatment of myopia constitutes prescription of appropriate concave lens or glasses
2. Surgical treatment involves LASIK
3. Others low vision aids, genetic counseling (prophylactic counseling)

ENT

121. Nasal septoplasty is not advised in:

a. Anterior deviation
b. Posterior deviation
c. Septal spur
d. As a part of rhinoplasty

Ans:(b) Posterior deviation

☞ Septoplasty indications are:

1. as apart of septorhinoplast for cosmetic reasons.
2. recurrent epitaxis usually from spur.
3. septal deviation causing sleep apnoea or hypopnoea
4. as an approach to pituitary fosa
5. access to endoscopic dacryocystorhinostomy operation in some cases.
6. sinusitis due to septal eviation.
7. deviated septum specially the anterior deviation.
8. septal deviation causing sleep apnoea or hypopnoea syndrome.

122. 70 year old has progressive hearing loss, bilateral Rinne positive, weber central. Diagnosis is:

a. Otosclerosis
b. SNHL
c. Presbycusis
d. Conductive hearing loss

Ans:(c)Presbycusis

☞ **Presbycusis:** sensorineural hearing loss associated with physiological aging process in the ear. It is usually manifested at the age of 65 years but may do so early if there is heridatary predisposition.

Test	normal	conductive deafness	SN deafness
Rinne	ac > bc(positive)	bc > ac (negative)	ac > bc
weber	not lateriilized	laterized to poor ear	laterized to better ear
ABC	same as examiners	same as examiner	reduced
schwabach	equal	lengthened	shortened

123. Treatment of choice for recurrent nasal polyposis is:

a. FESS
b. Polypectomy
c. Polyp avulsion
d. Antrectomy

Ans:(a)FESS

☞ **Indication of FESS:**

1. chronic bacterial sinusitis unresponsive to adequate medical treatment.
2. recurrent acute bacterial sinusitis.
3. polypoid rhinosinusitis
4. antrochoanal polyp
5. fungal sinusitis with fungal ball or nasal polypi.
6. mucocele of frontoethmoid or sphenoid sinus.
7. control of epitaxis by endoscopic cautery.
8. removal of foreign body from the nose or sinus.
9. endoscpoic septoplasty

124. Cholesteatoma is most common in:

a. Attic
b. Antrum
c. Central
d. Marginal

Ans:(a)Attic

☞ Atticoantral also called unsafe or dangerous type ; it involves posterosuperior part of the cleft (i.e attic,antrum and mastoid) and is associated with an attic or a marginal perforation. The disease is often associated with a bone eroding process such as cholesteatoma, granulations or osteitis.

125. Which of the following is not seen in posterior triangle of neck?

a. Accessory nerve
b. Inferior belly of omohyoid
c. Stylohyoid
d. Transverse cervical artery

Ans:(c)Stylohyoid

☞ **Contents of posterior triangle are:**

A. Nerves and Plexuses:

- Spinal accessory nerve (Cranial Nerve XI)
- Branches of cervical plexus
- Roots and trunks of brachial plexus
- Phrenic nerve (C3,4,5)

B. Vessels:
- Subclavian artery (Third part)
- Transverse cervical artery
- Suprascapular artery
- Terminal part of external jugular vein

C. Lymph Nodes:
- Occipital
- Supraclavicular

D. Muscles:
- Inferior belly of omohyoid muscle
- Anterior Scalene
- Middle Scalene
- Posterior Scalene
- Levator Scapulae Muscle
- Splenius

Dermatology

126. Drug of choice in multibacillary leprosy is:
a. Rifampicin, Clofazimine, Dapsone
b. Rifampicin, Clotrimazole, Dapsone
c. Rifabutin, Clotrimazole, Dapsone
d. Salbutamol, Clofazimine, Dapsone

Ans:(a)Rifampicin, Clofazimine, Dapsone

☞ Drug of choice in paucibacillary leprosy is Dapsone and Rifampicin
☞ Drug of choice in multibacillary leprosy is Clofazimine, Dapsone and Rifampicin

127. Seen in tuberculoid leprosy:
a. Few skin lesions and nerve thickening
b. Tingling of peripheries
c. Leonine facies
d. Multiple lesions

Ans:(a)Few skin lesions and nerve thickening

☞ In tuberculoid leprosy, sharply demarcated and hypoesthetic, hypopigmented macule is seen. Later on nerve thickening is seen.

128. A boy presents with papules and pustules in finger webs, flexor aspect of wrist. His brother, who shares his bed also had the similar problem. What is the diagnosis?
a. Psoriasis b. TEN
c. Scabies d. Pemphigus

Ans:(c)Scabies

☞ Itchy papules and pustules in finger webs and flexor aspects of wrist along with positive family history is classic finding in Scabies. Causative agent is sarcoptes scabiei. Drug of choice is permethrin cream. Oral medicine used in Ivermectin.

129. A patient on diclofenac develops bullous and target lesions on extensor surface. Soon, the patient is rushed to ICU for multi organ failure. Diagnosis is:
a. TEN
b. Erythema multiforme
c. Fixed drug eruption
d. Pemphigus

Ans:(a)TEN

☞ **Toxic epidermal necrolysis (TEN)** is a potentially life-threatening dermatologic disorder characterized by widespread erythema, necrosis, and bullous detachment of the epidermis and mucous membranes, resulting in exfoliation and possible sepsis and/or death

Psychiatry

130. Visual hallucination is seen in:
a. Mania
b. Depression
c. Alcoholic delirium tremens
d. Bipolar disorder

Ans:(c)Alcoholic delirium tremens

☞ Hallucination is false perception without external stimulus. Auditory hallucinations are a feature of non-organic disorders like schizophrenia or mania. Visual hallucinations are a feature of organic psychiatric disorders and drug and alcohol related illness. Olfactory hallucinations are seen in temporal lobe epilepsy, alzheimer's disease, mesial temporal lobe sclerosis. Tactile hallucinations are seen in cocaine or amphetamine use.

CSQ1

A 23 year newly married female presents in OPD with PV spotting and pain lower abdomen. Her LMP was 5 wks back. On examination, there is no tenderness or rigidity or mass per abdomen. Her vitals are stable. On PV examination, os is closed, mild PV bleeding. On investigation, WBC=11,000/cumm, Hb=10g%.

131. What is your first diagnosis?
a. UTI b. PID
c. Ectopic pregnancy d. Abortion

Ans:(c)Ectopic pregnancy

132. Which investigation will you send first?
a. USG b. HCG
c. Laparoscopy d. X ray

Ans:(a)USG

133. Investigation for definite diagnosis:
a. Hysteroscopy b. Cystoscopy
c. Laparoscopy d. X ray

Ans:(c)Laparoscopy

134.Procedure which is diagnostic as well as therapeutic:

a. Hysteroscopy b. USG
c. Laparoscopy d. Laparotomy

Ans:(d)Laparotomy

135. Treatment modalities are:

a. Expectant b. Medical
c. Surgical d. Medical and surgical

Ans:(d)Medical and surgical

Explanation

- Most common feature of ectopic pregnancy is abdominal pain
- Most reliable indicator of ectopic gestation is no gestational sac in USG
- Expelled products in ectopic originate from Decidua vera
- Medical treatment of ectopic pregnancy is Methotrexate, Actinomycin-D, mifepristone, prostaglandins
- Laparoscopy is the best investigation for diagnosis
- Commonest type which ruptures is isthmic
- Transvaginal usg and hcg level are also used
- Bagel sign is a sign of ectopic pregnancy in USG. It is a hypoechoic ring around gestational sac in adnexal region.
- Blob sign is a homogenous mass adjacent to ovary or moving separate from ovary. It is a gestational sac without cardiac activity.
- Salpingostomy is done for unruptured tubal pregnancy
- Salpingectomy is for ruptured tubal pregnancy with no desire for future pregnancy.

CSQ 2

A chronic alcoholic and chronic smoker adult male presents with non-bilious vomiting, weight loss and epigastric fullness for 5 weeks. On examination, succussion splash is heard and supraclavicular lymph node is palpable in left side.

136. What is your diagnosis?

a. Gastric carcinoma
b. Small intestine obstruction
c. Pancreatic carcinoma
d. Acute cholecystitis

Ans:(a) Gastric carcinoma

137. Vomiting is due to:

a. Gastric outlet obstruction
b. Gastric inlet obstruction
c. Intestinal obstruction
d. Vagal stimulation

Ans:(a)Gastric outlet obstruction

138. Treatment for palliation of vomiting is:

a. Subtotal gastrectomy
b. Total gastrectomy
c. Gastrojejunostomy
d. Feeding jejunostomy

Ans:(c)Gastrojejunostomy

139. Investigation of choice is:

a. UGI endoscopy b. Transabdominal USG
c. Barium swallow d. Barium meal

Ans:(a)UGI endoscopy

140. What is the enlarged left supraclavicular lymph node known as?

a. Blummer shelf b. Sister Mary
c. Virchow d. Lund

Ans:(c)Virchow

Explanation

- Gastric adenocarcinoma is the most common tumor of the stomach.
- Age affected is elderly male.
- Lesser curvature is more commonly involved than greater curvature.
- Earliest symptom is vague postprandial heaviness accompanied by weight loss. Other symptoms are early satiety, hematemesis, epigastric pain.
- Vomiting is due to gastric outlet obstruction, which is responsible for Hypochloremic metabolic alkalosis with paradoxical aciduria.
- Gastrojejunostomy is palliative surgery for vomiting.
- UGI endoscopy is the investigation of choice to diagnose gastric cancer.
- Spread of the cancer cells along the intrathoracic lymphatic channel leads to metastases in left supraclavicular node (Virchow node) i.e. Troiser sign, left axillary nodes (Irish node)

CSQ 3

A 23 year male injured his knee while playing football resulting in pain and swelling in his knee. He however completed the game after resting for few minutes. After the game, he could not walk properly due to pain and swelling in the knee and he could not fully extend his knee.

141. What is the diagnosis?

a. ACL injury b. PCL injury
c. Meniscus injury d. Collateral ligament injury

Ans:(c)Meniscus injury

142. Investigation of choice is:

a. CT b. MRI
c. USG d. X ray

Ans:(b) MRI

143. What is the mechanism of injury here?

a. Twisting and flexion of knee
b. Rotation of knee
c. Sudden standing from squatting position.
d. Forward flexion of knee

Ans:(b) Rotation of knee

144. Why can't he extend his knee?

a. Due to ACL injury
b. Due to PCL injury
c. Due to bucket handle tear of meniscus
d. Due to loose bodies in knee joint

Ans:(d)Due to loose bodies in knee joint

145. Treatment of choice is:

a. ACL repair b. PCL repair
c. Meniscus excision d. Meniscus repair

Ans:(c)Meniscus excision

Explanation

- Menisci
- The peripheral edges of the menisci are convex, fixedn and attached to the inner surface of the knee joint capsule, except where the popliteus is interposed laterally; these peripheral edges also are attached loosely to the border of the tibial plateaus by the coronary ligaments.
- The inner edges are concave, thin and unattached. The menisci are largely avascular except near their peripheral attachments to the coronary ligaments.
- The medial meniscus is a C shaped, lateral is more circular
- The medial meniscus when injured, produces loose intra-articular bodies and locking of the knee
- MRI is the diagnostic modality of choice.
- Arthroscopic surgery done is partial menisectomy or meniscal repair.

CSQ 4

A patient developed facial puffiness which later developed into generalized edema. Urine examination showed 4+ proteinuria with hyaline cast. Cholesterol is raised in blood.

146. What is your diagnosis?

a. Nephrotic syndrome
b. Nephritic syndrome
c. Alport syndrome
d. Malnutrition

Ans:(a)Nephrotic syndrome

147. Diagnostic test is:

a. Urine RE
b. Urine culture
c. Urine protein creatinine ratio
d. CBC

Ans:(c)Urine protein creatinine ratio

148. Drug of choice is:

a. Antibiotic b. Prednisolone
c. Iv fluid d. Furosemide

Ans:(b) Prednisolone

149. Which organism is responsible for peritonitis in such patients?

a. E. coli b. Streptococcus pneumoniae
c. Staphylococcus d. Hemophilus

Ans:(b) Streptococcus pneumoniae

150. Drug of choice for above organism is:

a. Cephalexin b. Ampicillin
c. Amoxicillin d. Benzyl penicillin

Ans:(d)Benzyl penicillin

Explanation

- Nephrotic syndrome
- Massive proteinuria (>3.5g/day), hypoalbuminemia due to proteinuria, Edema due to decreased plasma oncotic pressure, hyperlipidemia, lipiduria and hypercoagulability are the feature of nephrotic syndrome.
- Urinalysis shows 3+ or 4+ proteinuria, spot urine protein creatinine ratio is >2, Sr albumin is <2.5g/dl, Sr. cholesterol is increased, sr. complement level is normal.
- Prednisolone is drug of choice. Single daily dose of2mg/kg/day max 60mg/day for 4 weeks then alternate day dose of 1.5mg/kg QID for 8 week to 5months is practiced regimen
- Pneumococcus and other gram negative bacteria is involved for various infections s/a cellulits, spontaneous bacterial peritonitis and bacteremia

CSQ 5

A patient of RTA has head injury.

151. True about head trauma:

a. Initial assessment must be according to ATLS protocol
b. Get CT head immediately after receiving patient in ER
c. Give methylprednisolone immediately
d. Don't start treatment without CT

Ans:(a)Initial assessment must be according to ATLS protocol

152. On examination, he opens eye only on painful stimulus, speaks inappropriate words, has abnormal flexion. His GCS is:

a. 6 b. 7
c. 8 d. 9

Ans:(c)8

153. True about extradural hemorrhage is:

a. Only occurs d/t fracture of temporal bone with middle meningeal artery injury.
b. May also occur from edges of fractured temporal bone with bridging veins injury
c. No lucid interval
d. Biconcave on CT

Ans:(b) May also occur from edges of fractured temporal bone with bridging veins injury

154. Not a primary head injury:

a. EDH b. SDH
c. DAI d. Cerebral edema

Ans:(d)Cerebral edema

155. CSF production rate is:

a. 0.2-0.4ml/min b. 0.5-1.5ml/min
c. 2-5ml/min d. 5-10ml/min

Ans:(a)0.2-0.4ml/min

Explanation

- In a case of RTA, always follow ATLS protocol.
- Glassgow coma scale
- **Eye response:**
  - Spontaneous 4
  - To speech 3
  - To pain 2
  - Nil 1
- **Verbal response:**
  - Oriented 5
  - Confused 4
  - Verbalise 3
  - Vocalise 2
  - Nil 1
- **Motor response:**
  - Obeys command 6
  - Localises pain 5
  - Flexion response to pain 4
  - Abnormal flexion to pain 3
  - Extension to pain 2
  - Nil 1
- Normal rate of production of CSF is 20ml/hr which is approximately equal to 0.2-0.4ml/min

CSQ 6

A patient who .was given inj. Benzyl penicillin, developed respiratory difficulty and low BP.

156. Diagnosis is:

a. Anaphylaxis b. Sepsis
c. Respiratory failure d. Heart failure

Ans:(a)Anaphylaxis

157. What is the drug of choice?

a. Adrenaline b. Dopamine
c. Antibiotic d. IV fluid

Ans:(a)Adrenaline

158. Which is responsible for this?

a. Histamine b. Leukotriene
c. Serotonin d. Prostaglandin

Ans:(a)Histamine

159. Adrenaline acts on:

a. Alpha b. Beta
c. Alpha + beta d. Mu

Ans:(c)Alpha + beta

160. Vasomotor reversal is seen with:

a. Isoprenaline b. Adrenaline
c. Phentolamine d. Prazosin

Ans:(b) Adrenaline

Explanation

- Anaphylaxis is Type I hypersensitivity reaction, which is potentially life threatening systemic allergic reaction, that can result in airway obstruction as well as cardiovascular collapse.
- Causes- Foods (e.g. Peanuts, Fish), Insect bite and snake bites, Medications (e.g sulfa drugs).
- IM epinephrine is first line therapy
- MOA – alpha1 agonism that results in increased vasoconstriction and decreases mucosal edema. Beta 1 agonism results in increased chronotropy and ionotropy. Beta 2 agonism results in bronchodilation and decreases inflammatory mediator released from mast cells and basophils.
- Adrenaline acts on two types of receptors. Alpha and beta receptors. Alpha receptors cause vasoconstriction where as beta receptors mediate vasodilation. **Beta receptors are more sensitive.** So large i.v. infusion of adrenaline causes vasoconstriction which i ncreases blood pressurevia the alpha receptors. But after a while, there is a re-uptake and dissipation of adrenaline.
- This decreases the adrenaline concentration, which doesnot stimulate the alpha receptors but is enough to stimulate the sensitive beta receptors. Hence there a **secondary fall in blood pressure.** So what happens if you block only the alpha receptors? A **fall in blood pressure** due to beta mediated vasodilation. This is known as **vasomotor reversal of Dale.**

CSQ 7

A chronic alcoholic presents with pain radiating to back, bulky foul smelling stool.

161. What is your diagnosis?

a. Chronic pancreatitis
b. Cholelithiasis
c. PUD
d. Hepatitis

Ans:(a)Chronic pancreatitis

162. Investigation of choice is:

a. USG b. S. amylase
c. CBC d. Liver function test

Ans:(b) S. amylase

163. You should later do:

a. CECT b. MRI
c. Plain CT d. USG

Ans:(a)CECT

164. Management of such a case is:

a. NPO for 48 hours
b. Frequent small liquid diet
c. Frequent small soft diet
d. Iv morphine

Ans:(a)NPO for 48 hours

165. "Pad sign" is a feature of which disease?

a. Duodenal peptic ulcer
b. Chronic pancreatitis
c. Cancer head of the pancreas
d. Pyloric stenosis

Ans:(c)Cancer head of the pancreas

CSQ 8

A 25 year girl presented with hemoptysis, weight loss, breathlessness, cough. CXR shows cavitary lesion on apex of right lung.

166. What is your diagnosis?

a. TB b. Interstitial lung disease
c. BA d. COPD

Ans:(a)TB

167. Gold standard for diagnosis is:

a. Sputum examination for AFB
b. PCR
c. CXR
d. Mantoux test

Ans:(a)Sputum examination for AFB

168. Most common 5/E of ATT:

a. Optic neuritis b. Nephropathy
c. Hepatitis d. Hyperuricemia

Ans:(c)Hepatitis

169. If she develops massive hemoptysis, what is the management of choice?

a. Tranostat
b. Bronchial artery embolization
c. Blood transfusion
d. Antibiotics

Ans:(b) Bronchial artery embolization

170. Optic neuritis is seen with

a. Rifampicin b. Isoniazid
c. Streptomycin d. Ethambutol

Ans:(d)Ethambutol

Explanation

- Hemoptysis, weight loss, breathlessness, cough, cavitary lesion on apex is the typical finding of pulmonary tuberculosis. Demonstration of acid fast bacilli on 3 early morning sample of sputum is the most widely used method for diagnosis. Hepatitis is the most common side effect of Antitubercular therapy. Bronchial artery is the source of hemoptysis. So in case of massive hemoptysis bronchial artery embolization needs to be done.
- **Classic side effects of ATT:**
  Rifampin- red orange metabolites, cyt p450 inducer
  Isoniazide- Hepatotoxicity and peripheral neuropathy
  Ethambutol- Dose dependent optic neuritis
  Pyrazinamide- Hyperuricemia

CSQ 9

A child with atopy has recurrent attacks of breathlessness.

171. What is your diagnosis?

a. BA b. Pneumothorax
c. Pneumonia d. Bronchiolitis

Ans:(a)BA

172. What is the diagnostic test?

a. Sputum examination
b. Spirometry
c. X ray
d. USG

Ans:(b) Spirometry

173. Drug of choice for short term treatment:

a. Salbutamol b. Oral Steroid
c. Theophylline d. Inhaled steroid

Ans:(a)Salbutamol

174. Drug of choice for long term treatment:

a. Salbutamol b. Oral Steroid
c. Theophylline d. Inhaled steroid

Ans:(d)Inhaled steroid

175. What is the prognosis?

a. Most cases become disease free by 13-15 years of age
b. They need treatment lifelong
c. Guarded
d. High mortality

Ans:(a) Most cases become disease free by 13-15 years of age

CSQ 10

A primi after trying to get pregnant for 5 years, presents on OPD in 10 wks POG with reports showing dizygotic twins, following ART.

176. Chorionicity in dizygotic twins is:

a. Diamniotic dichorionic if of different sex
b. Diamniotic monochorionic if of different sex
c. Monoamniotic monochorionic if of different sex
d. Diamniotic monochorionic if of same sex.

Ans:(a)Diamniotic dichorionic if of different sex

177. Placenta in dizygotic twins is;

a. Always separate b. Fused or separate
c. Always fused d. Single

Ans:(b) Fused or separate

178. Which can be rule out in this case?

a. Fetus papyraceus b. Vanishing twin
c. Conjoint twin d. TTTS

Ans:(c)Conjoint twin

179. Chorionicity can be diagnosed via USG by;

a. 1st trimester b. 2nd trimester
c. 3rd trimester d. 4th trimester

Ans:(a)1st trimester

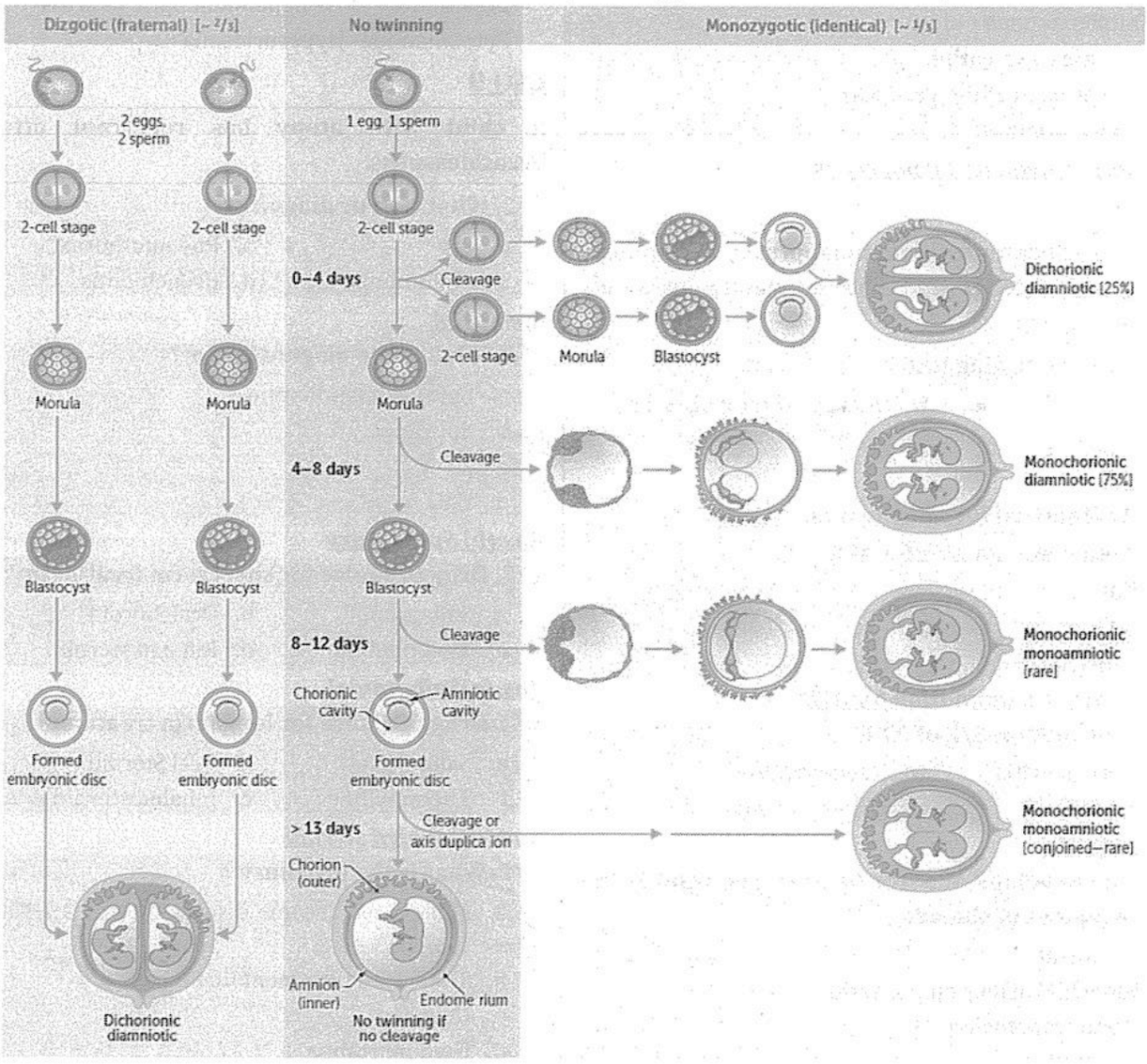
180. Cause of twins in this case is:

a. Maternal age b. Use of ART for pregnancy
c. Spontaneous d. Mutation

Ans:(b) Use of ART for pregnancy

Explanation

- In dizygotic twins, chrionicity is dichorionic and diamniotic
- Placenta may be fused or separate
- Dizygotic twins rules out conjoined twins



NMCLE - SHRAWAN 2074

Anatomy

1. The right suprarenal vein drains into the

a. Inferior venacava b. Right renal vein
c. Right gonadal vein d. Left renal vein

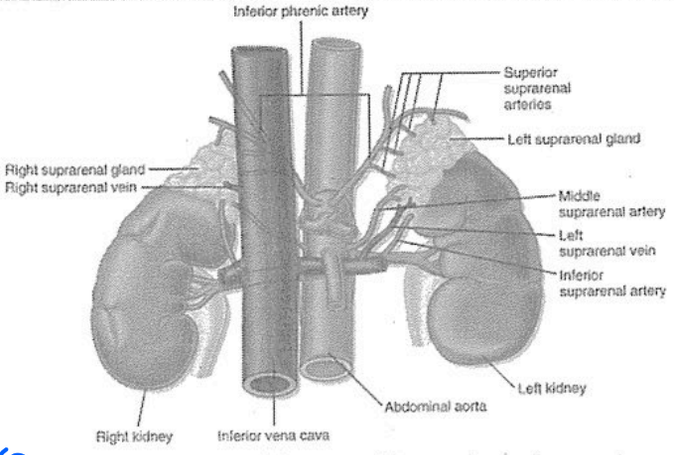
Blood supply of suprarenal gland:-

Arterial supply

- Superior suprarenal artery: Branch of Inferior phrenic artery
- Middle suprarenal artery: Branch of Abdominal aorta
- Inferior suprarenal artery: Branch of Renal artery

Venous Drainage

- Right Suprarenal Vein – Drains into Inferior venacava
- Left Suprarenal Vein – Drains into Left renal vein



2. Nerve compressed in carpal tunnel syndrome is:

a. Median Nerve b. Ulnar Nerve
c. Radial Nerve d. Interosseous Nerve

Carpal Tunnel Syndrome:

- Entrapment of the median nerve at the wrist
- Caused by the decreased size or space of the carpal tunnel
- Can be precipitated by overuse of wrist flexors; associated with diabetes mellitus or thyroid dysfunction
- Commonly occurs in pregnant and middle aged women

C/F -aching pain over the thenar aspect of the hand and proximal forearm

- Paresthesias or numbness in median nerve distribution (palmar surface the first 3 fingers)
- Symptoms worsen at night, when the wrist are held in flexion, or with repetitive hand use
- Phalen maneuver and Tinel sign are positive

3. Common site for avascular necrosis is:

a. Head of femur b. Scaphoid
c. Talus d. All of the above

Following the fracture, blood supply of some bones is such that the vascularity of a part of it is seriously jeopardized, resulting in necrosis of that part. This is called avascular necrosis.

Common sites are:

Site	Cause
Head of the femur	Fracture neck of the femur.
	Posterior dislocation of hip
Proximal pole of scaphoid	Fracture through the waist of the scaphoid
Body of the talus	Fracture through neck of the talus

4. Vitelline vein forms

a. Ligamentum venosum
b. Ligamentum teres
c. Portal vein
d. Superior venacava

In the fifth week of intrauterine life, three pairs of major veins can be distinguished

a) Vitelline veins, or omphalomesenteric veins, carrying blood from the yolk sac to the sinus venosus

b) Umbilical veins, originating in the chorionic villi and carrying oxygenated blood to the embryo

c) Cardinal veins, draining the body of the embryo proper

Vitelline veins contribute to the hepatic sinusoids, hepato-cardiac portion of the inferior venacava, portal vein and superior mesenteric vein

Physiology

5. QRS complex in ECG represents

a. Atrial repolarization
b. Ventricular depolarization
c. Atrial depolarization
d. Plateau

- P wave in ECG represents atrial depolarization
- QRS complex represents ventricular depolarization
- T wave represents ventricular repolarization
- Atrial repolarization coincides with ventricular depolarization hence is not recorded in ECG strip.

1.a Inferior venacava	2.a. Median Nerve	3.d. All of the above
4.c. Portal vein	5.b. Ventricular depolarization	6.a. Decreased by cholecystokinin

4.c Portal vein	5.b Ventricular depolarization	6.a Decreased by cholecystokinin
7.b Hypocapnia	8.c Septum, Endocardium, Epicardium	9.b Surface area

6. Which of the following is true about gastric emptying?

a. Decreased by cholecystokinin
b. Decreased by gastrin
c. Increased by secretin
d. Increased by GIP

- Cholecystokinin released by I cells in duodenum and jejunum, decreases gastric emptying
- Gastrin released by G cells in antrum of stomach and duodenum, increases gastric motility and hence gastric emptying
- Secretin released by S cells of duodenum decreases gastric emptying
- GIP (Glucose dependent Insulinotropic peptide) aka Gastric inhibitory peptide secreted by K cells of duodenum and jejunum decreases gastric emptying

7. Which of the following does not stimulate peripheral chemoreceptors?

a. Hypoxia
b. Hypocapnia
c. Acidosis
d. Low perfusion pressure

- Peripheral chemoreceptors found at carotid bodies and aortic bodies increases the drive for ventilation via increase in CO2 (hypercapnia) or sudden decrease in systemic arterial PO2 (Hypoxia). The hydration of CO2 and subsequent dissociation of H2CO3 generates H+. Thus acidosis is also the drive for ventilation for peripheral chemoreceptor.
- Central chemoreceptors located in the face of medulla, are stimulated by CSF H+ and CO2. There are no central PO2 receptors.

8. The order of activation after stimulation of Purkinje fibers is:

a. Endocardium, Septum, Epicardium
b. Endocardium, Epicardium, Septum
c. Septum, Endocardium, Epicardium
d. Septum, Epicardium, Endocardium

- Impulse carried by Purkinje fibers stimulates septal muscles first, then followed by endocardium and finally epicardium

9. BMR depends on

a. Body weight
b. Surface area
c. Amount of adipose tissue
d. Amount of lean body mass

- Basal metabolic rate is expressed as energy consumed per square meter body surface area per hour. Hence, BMR depends on surface area.

Biochemistry

10. 6/M complains of darkening of urine on standing. The condition is:

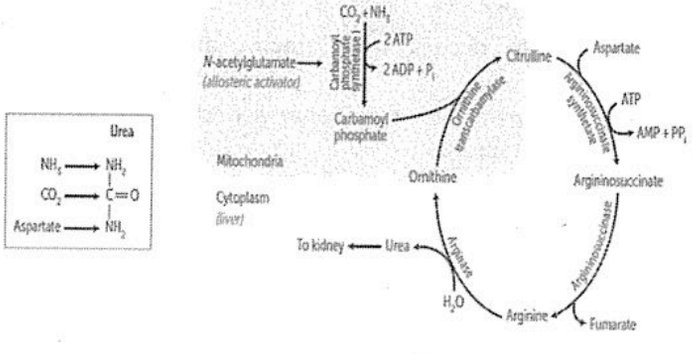
a. Albinism
b. Homocystinuria
c. Phenylketonuria
d. Alkaptonuria

- Albinism- Normal melanocyte number with decreased melanin production due to decreased tyrosine kinase activity or defective tyrosine transport.
- Homocystinuria- Autosomal recessive disorder resulting in increased **HOMOCYS**teine. **H**omocysteine in urine, **O**steoporosis, **M**arfanoid habitus, **O**cular changes (downward and inward lens subluxation), **C**ardiovascular effects (thrombosis and atherosclerosis – Stroke and MI), k**Y**phosis, intellectual disability.
- Phenylketonuria- Autosomal recessive disorder in which there is excess phenyl ketones (phenylacetate, phenyllactate and phenylpyruvate) in urine due to decreased phenylalanine hydroxylase or decreased tetrahydrobiopterin cofactor. Findings are – intellectual disability, growth retardation, seizures, fair skin, eczema, musty body odor
- Alkaptonuria- Congenital deficiency of homogentisate oxidase which results in accumulation of pigment forming homogentisic acid in tissue. Findings are - bluish black connective tissue, ear cartilage and sclerae (ochronosis); urine turns black on prolonged exposure to air. May have debilitating arthralgias (homogentisic acid toxic to cartilage).

11. Sources of nitrogen in urea cycle are:

a. Aspartate and ammonia
b. Glutamate and ammonia
c. Arginine and ammonia
d. Uric acid

- Amino acid catabolism yields metabolites that serve as a metabolic fuels. Excess nitrogen generated by this process is converted to urea (Urea cycle) and excreted by kidneys. As shown in the figure, the first nitrogen of Urea is from free NH3, Carbon is from CO2 and the second nitrogen of urea is from Aspartate.



7.b Hypocapnia	8.c Septum, Endocardium, Epicardium	9.b Surface area
10.d Alkaptonuria	11.a Aspartate and ammonia	12.c Enolase

12. **Which of the following enzyme is inhibited by Fluoride?**
   a. Pyruvate Kinase b. Succinyl dehydrogenase
   c. Enolase d. Aldolase

13. **Flexibility of protein depends on:**
   a. Glycine b. Tryptophan
   c. Phenylalanine d. Histidine

☞ Glycine is responsible for flexibility of proteins. It is the simplest amino acid. It does not exist in isomeric form.

14. **Rate limiting enzyme in the synthesis of cholesterol is:**
   a. HMG CoA reductase
   b. HMG CoA synthetase
   c. Acetyl CoA synthetase
   d. Acetyl CoA carboxylase

☞ HMG CoA reductase is the rate determining enzyme of cholesterol synthesis. Insulin, thyroxine hormone stimulates and Glucagon, cholesterol inhibits the synthesis of cholesterol. HMG CoA Synthetase is the rate determining enzyme of ketogenesis.

15. **Cobalt is the component of which of the following vitamin?**
   a. Biotin b. Vitamin B12
   c. Vitamin A d. Tocopherol

☞ Chemical structure of vitamin B12 contains the biochemically rare element cobalt positioned in the center of a planar tetra pyrrole ring called a corrin ring.

ANSWERS

1.a Inferior venacava	2.a. Median Nerve	3.d. All of the above
4.c Portal vein	5.b Ventricular depolarization	6.a Decreased by cholecystokinin
7.b. Hypocapnia	8.c. Septum, Endocardium, Epicardium	9.b Surface area
10.d Alkaptonuria	11.a Aspartate and ammonia	12.c. Enolase
13.a. Glycine	14.a. HMG CoA reductase	15.b Vitamin B12

Microbiology

16. **An AIDS patient with T lymphocyte counts <200/mm3, presented with complaints of headache, nausea, dizziness and irritability. As a part of the diagnostic tests, spinal fluid was submitted to the laboratory with a request to examine the specimen directly in india ink to enhance visualization of the encapsulated organisms. This request was made on the suspicion of a diagnosis of?**
   a. Histoplasmosis b. Candidiasis
   c. Nocardiosis d. Cryptococcosis

Cryptococcus neoformans
- Heavily **encapsulated** yeast
- Not dimorphic
- Found in soil, pigeon droppings
- Acquired through inhalation with hematogenous dissemination to meninges
- Culture on Sabouraud agar
- Highlighted with **India ink (clear halo)** and mucicarmine (red inner capsule)
- Latex agglutination test detects polysaccharide capsular antigen and is more specific
- Causes cryptococcosis, cryptococcal meningitism cryptococcal encephalitis (Soap bubble lesions in brain) primarily in **immunocompromised**.

17. **Autoinfection is mode of transmission in**
   a. Trichinella b. Cysticercosis
   c. Ancylostoma d. Ascaris

☞ For T. solium autoinfection is a possible route of infection. This means that humans can become infected with the eggs spread by other humans or themselves and develop cysticerci in their tissues.

18. **Endotoxins are**
   a. Heat labile
   b. Polysaccharide and lipid complex
   c. Strongly antigenic
   d. Exhibit specific pharmacological effect for each endotoxin

☞ Endotoxins are heat stable. They remain stable at 100 deg C for 1 hour. They are lipid A component of Lipopolysaccharide (structural part of bacteria – gram negative; released when lysed). They are poorly antigenic.

☞ Exotoxins on the other hand are heat labile. They are destroyed rapidly at 60 deg C (except Staphylococcal enterotoxin and E coli heat stable toxin). They are polypeptide and induces high-titer antibodies called antitoxins.

19. **Which of the following immunoglobulin can cross the placenta?**
   a. IgA b. IgM
   c. IgG d. IgD

16.d. Cryptococcosis	17.b. Cysticercosis	18.b. Polysaccharide and lipid complex
19.c. IgG	20.a. Apoptosis	21.a. Myxoma

Few important questions from immunoglobulin classes

- Only heat labile immunoglobulin – IgE
- Immunoglobulin present in milk – IgA and IgG
- Immunoglobulin to fix complement via alternate pathway – IgA (A for Alternate)
- Immunoglobulin to fix complement via classical pathway – IgG and IgM
- Immunoglobulin with maximum serum concentration – IgG
- Immunoglobulin with maximum molecular weight – IgM (M for Max MW)
- Immunoglobulin with maximum sediment coefficient – IgM
- Immunoglobulin with shortest half life – IgE
- Immunoglobulin that can cross placenta – IgG

Pathology

20. Programmed cell death is also called as:

a. Apoptosis b. Necrosis
c. Degeneration d. Calcification

- Apoptosis is the ATP dependent programmed cell death.
- In Apoptosis cell membrane remains intact without significant inflammation (unlike necrosis)
- DNA laddering (fragments in multiples of 180 bp) is a sensitive indicator of apoptosis
- Characterised by deeply eosinophilic cytoplasm and basophilic nucleus, pyknosis (nuclear shrinkage) and karyorrhexis (fragmentation caused by endonuclease-mediated cleavage)

21. Most common tumor of heart is:

a. Myxoma b. Rhabdomyosarcoma
c. Fibroma d. Leiomyosarcoma

- Most common heart tumor is a metastasis (e.g. Melanoma)
- Most common primary cardiac tumor in adults is myxoma.
- 90% of myxoma occurs in atria (mostly left atrium). May auscultate early diastolic "tumor plop" sound.
- Rhabdomyomas are the most frequent primary cardiac tumor in children (associated with tuberous sclerosis).

22. The most pre-cancerous condition for carcinoma colon is:

a. Familial adenomatous polyposis
b. Hamartomatous polyps
c. Juvenile polyposis
d. Hyperplastic polyps

- **Familial adenomatous polyposis** – Autosomal dominant mutation of APC tumor suppressor gene on chromosome 5q21.
  Thousands of polyps arise starting after puberty
  Pancolic. Always involves rectum
  Prophylactic colectomy is required or else **100% progress to colorectal cancer**
- **Hamartomatous polyps** – Do not have significant risk of transformation. It is the growth of normal colonic tissue with distorted architecture. May be associated with Peutz-Jeghers syndrome and juvenile polyposis
- **Juvenile polyposis** – Autosomal dominant syndrome in children (typically <5 years old) featuring numerous hamartomatous polyps. Associated with increased risk of colorectal cancer
- **Hyperplastic polyps** – Generally smaller and predominantly located in the rectosigmoid region. May occasionally evolve into serrated polyps and more advanced lesions

23. Clinical features of minimal change glomerulonephritis are all except:

a. Hypertension
b. Edema
c. Selective proteinuria
d. Fever

- Minimal change disease is the most common cause of Nephrotic syndrome in children. Hypertension is the feature of nephritic syndrome and not nephrotic syndrome

24. Which of the following histological type lung carcinoma has worst prognosis?

a. Squamous cell carcinoma
b. Adenocarcinoma
c. Alveolar carcinoma
d. Small cell carcinoma

Small cell (oat cell) carcinoma

Location – central

- Undifferentiated, very aggressive. Worst prognosis despite best response to radiotherapy and chemotherapy
- Histology shows Kulchitsky cells (small dark blue cells). Chromogranin A and neuron-specific Enolase positive

Adenocarcinoma

Location – Peripheral

- Most common lung cancer in non smokers and overall (except metastasis)
- Glandular pattern on histology, often stains mucin positive

Squamous cell carcinoma

19.c. IgG	20.a. Apoptosis	21.a. Myxoma
22.a. Familial adenomatous polyposis	23.a. Hypertension	24.d. Small cell carcinoma

Location – central
- Hilar mass arising from bronchus
- Cavitation
- Cigarettes
- Hypercalcemia

25. **Pathological manifestation of alcoholic liver disease include all of the following except:**
a. Piecemeal necrosis
b. Ballooning degeneration
c. Macro vesicular fatty changes
d. Central hyaline sclerosis

- Alcoholic liver disease includes hepatic steatosis (Macrovesicular fatty change), alcoholic hepatitis (Mallory bodies, swollen and necrotic hepatocytes with neutrophilic infiltration) and alcoholic cirrhosis (regenerative nodules surrounded by fibrous bands).
- Piecemeal necrosis is the hallmark of progressive viral hepatitis.

26. **In an inflammatory response, macrophage are usually derived from:**
a. Monocytes b. Reticuloendothelial cells
c. Neutrophils d. Lymphocytes

- In an inflammatory response, monocytes leave the blood and enter the tissues, where they are called macrophages.

Pharmacology

27. **Mechanism of action of Pralidoxime is:**
a. Inhibition of AChE
b. Reactivation of AChE
c. Inhibition of Atropine release
d. Activation of Atropine release

- In Organophosphorous poisoning, antidote is Atropine (competitive inhibitor) + Pralidoxime (regenerates AChE if given early)

28. **Test for myasthenia gravis is:**
a. Succinylcholine b. Edrophonium
c. Atracurium d. d-tubocurarine

Anticholinesterases:
- Galantamine, Donepezil, Rivastigmine: Treatment of Alzheimer's disease
- Edrophonium: Historically used to diagnose myasthenia gravis (now replaced by anti-acetylcholine receptor antibody test)
- Neostigmine: Treatment of postoperative and neurogenic ileus and urinary retention, myasthenia gravis, reversal of neuromuscular junction blockade (postoperative)
- Physostigmine: Antidote for anticholinergic (atropine) toxicity. Crosses blood brain barrier
- Pyridostigmine: Treatment of myasthenia gravis (long acting). Does not cross blood brain barrier

29. **Which drug is contraindicated in myasthenia gravis?**
a. Succinyl choline b. Tubocurare
c. Neostigmine d. Halothane

- Succinyl choline is depolarizing muscle relaxant. Its action is not antagonized by anticholinesterase agents. It is contraindicated in myasthenia gravis.

30. **SLE is caused by all except:**
a. Barbiturates b. Asparaginase
c. Phenytoin d. Labetalol

Drug induced lupus is caused by:
- Antiarrhythmics- procainamide, Disopyramide and propafenone
- Antihypertensive- Hydralazine
- Antithyroid- Propylthiouracil
- Antipsychotics- Chlorpromazine and lithium
- Anticonvulsants- Carbamazepine and phenytoin
- Antibiotics- Isoniazid, Minocycline and Nitrofurantoin
- Antirheumatic- Sulfasalazine
- Diuretic- Hydrochlorthiazide
- Antihyperlipidemics- Lovastatin and simvastatin
- IFNs and TNF inhibitors
- Asparaginase
- Barbiturates

ANSWERS

16.d. Cryptococcosis	17.b. Cysticercosis	18.b. Polysaccharide and lipid complex
19.c. IgG	20.a. Apoptosis	21.a. Myxoma
22.a. Familial adenomatous polyposis	23.a. Hypertension	24.d. Small cell carcinoma
25.a. Piecemeal necrosis	26.a. Monocytes	27.b. Reactivation of AChE
28.b. Edrophonium	29.a. Succinyl choline	30.d. Labetalol

Forensic Medicine

31. **All of the following methods are used for detecting heavy metals, EXCEPT:**
a. Harrison and Gilroy test
b. Paraffin test

c. Neutron activation analysis
d. Atomic adsorption spectroscopy

- **Paraffin test** – to detect presence of dermal nitrite
- **Harrison and Gilroy test** – To detect metal residues as lead, barium, etc
- **Neutron activation analysis** – To detect metal residues
- **Atomic absorption spectrophotometer** – To detect lead

32. Nepal Medical Council Act was framed in:

a. 1962 b. 1963
c. 1964 d. 1965

- Nepal Medical council Act was framed in 2020 BS (1964 AD). Till today four amendments has been done to the act, latest being on 2057 BS (2001 AD).

Few important acts of Nepal:

- Mental Health Act, 2006
- Nepal's Consumer Protection Act, 1998
- Nepal Pharmacy Council Act, 2000
- Human Body Organ Transplantation Act, 1998
- Nepal Health Service Act, 1997
- Nepal Health Research Council Act, 1991

33. Mummification is due to:

a. Putrefaction b. Dessication
c. Saponification d. Necrosis

- Mummification is a modification of putrefaction that occurs in dry air condition, in presence of wind and high temperature. Mummification takes place where body loses fluid to environment via evaporation. Dessication, dehydration, shrinkage of cadaver occur but features of body are preserved.

34. Paltauff's hemorrhage may be seen in:

a. Hanging
b. Drowning
c. Strangulation
d. Carbon monoxide poisoning

- Paltauff's hemorrhage are subpleural hemorrhages noted over anterior surface and margin of lungs in drowning. They are caused due to rupture of interalveolar partitions beneath the pleura.
- Emphysema aquosum: The lungs feels heavy, doughy, spongy and water lodged. This condition indicates that person was conscious and struggles for life.
- Edema aquosum: This condition develops when person is passively immersed with no violent effort of respiration in water or when person is unconscious. It is a state of mere flooding of lungs with water with no formation of column of froth.

35. Transvestism is:

a. Wearing clothes of opposite sex
b. Touching one's own private parts to others
c. Desire for sexual intercourse with dead bodies
d. Orgasm from visualization part of the body of a woman

Sexual paraphilias:

- Sadism- Sexual gratification by inflicting pain, torture and humiliation to other partner
- Masochism- Sexual gratification from being bitten, tortured or humiliated by partner
- Bondage- Condition where both sadism and masochism are present
- Fetishism- Sexual gratification by seeing some part of body of a female or some article belonging to her
- Transvestism (eonism)- Wearing clothes of opposite sex
- Exhibitionism- Sexual gratification by indecent exposure of genital in public place
- Voyeurism (scoptophilia)- Sexual gratification by repeatedly seeing the other person while undressing, bathing or doing sexual intercourse
- Troilism- Sexual gratification obtained by husband by watching or seeing his wife doing sexual intercourse with another person
- Frotteurism- Sexual gratification obtained by touching the body or body parts of other person
- Necrophagia- Sexual gratification obtained by eating flesh of a dead person
- Necrophilia- Sexual gratification obtained by doing sexual intercourse with dead bodies
- Myxoscopia- Sexual gratification obtained by watching sexual intercourse of other person or couple
- Satyriasis- Excessive sexual desire and drive in males
- Nymphomania- Excessive sexual desire and drive in females
- Pornographomania- Sexual gratification obtained by watching porns
- Erotographomania- Sexual gratification obtained by obscene and vulgar writings in public places
- Coprolalia- Sexual gratification obtained by using obscene and vulgar language in public
- Undism- Sexual gratification obtained by watching the act of urination of another person
- Coprophilia- Sexual gratification obtained by smelling

31.b. Paraffin test	32.c. 1964	33.b. Dessication
34.b. Drowning	35.a. Wearing clothes of opposite sex	36.b. Circular

or touching fecal matter of opposite sex

- Ecoutage- Sexual gratification obtained by hearing sounds of love-making or sexual intercourse
- Pygmalionism- Sexual gratification by watching or handling nude statues of opposite sex
- Gerontophilia- Specific sexual inclination towards the elderly
- Pedophilia- Sexual gratification obtained by involving in sexual activities with children

36.In Nulliparous, cervical opening is

a. Longitudinal b. Circular
c. Transverse d. Fimbriated

- In nulliparous, the vaginal part of the cervix is conical with the external os looking circular, whereas in parous, it is cylindrical with the external os having bilateral slits. The slit is due to invariable tear of the circular muscles surrounding the external os and gives rise to anterior and posterior lips of the cervix.

Community Medicine

37.In a study conducted by NHRC, every 5th house in village selected. Which type of sampling method is this?

a. Simple random sampling
b. Quota sampling
c. Snow ball sampling
d. Systemic random sampling

Sampling methods:-

- Simple random sampling- It is done by assigning a number to each of units in the sampling frame. A table or random numbers is then used to determine which units are to be included in the sample. Sample is then drawn in such a way that each unit has an equal chance of being drawn in a sample. This technique provides greatest number of possible samples.
- Systemic random sampling- It is done by picking every 5th or 10th unit at regular intervals. By this method, each unit in the sampling frame would have the same chance of being selected, but the number of possible samples is greatly reduced
- Stratified random sampling- In this samples are deliberately drawn in a systematic way so that each portion of the same represents a corresponding strata of the universe. E.g., classifying according to religion, age groups, etc.
- Quota sampling: In this sampling method, sampling is done by gathering representative data from a group.
- Snow-ball sampling: Non probability sampling where existing study subjects recruit future subjects from their acquaintances.

38.In a population of 1000 people, 40 people are infected with a particular disease, of which 20 died. The case fatality rate is:

a. 20% b. 30%
c. 36.66% d. 50%

- Case fatality rate is the measure of the risk of persons dying from a certain disease within a given time period (killing power of disease). It is typically used in acute infectious disease. It is actually a ratio.

$$CFR = \frac{Total\ number\ of\ deaths\ due\ to\ a\ particular\ disease}{Total\ number\ of\ cases\ due\ to\ the\ same\ disease} X\ 100$$

=20/40 X 100
=50%

39.Disease in which herd immunity does not protect an individual is:

a. Measles b. Tetanus
c. Polio d. Diphtheria

- Herd immunity is a type of immunity that occurs when the vaccination of a portion of population (or herd) provides protection to unprotected individuals. In Faroe islands in 1854, severe measles epidemic occurred where the population had no previous experience of measles. The epidemic wave declined with a build-up of herd immunity following natural infection. This has also been achieved in diphtheria and poliomyelitis. In the case of tetanus, herd immunity doesnot protect the individual.

40.Best comparison of health status of two population is by:

a. Crude death rate
b. Proportional crude death
c. Standard mortality rate
d. Specific death rate

- Crude death rate lack comparibility for communities with populations that differ by age, sex, race, etc. Standardized mortality rate is the best means for such comparisions.

41.Commonest complication of Mumps is:

a. Orchitis & Oophoritis
b. Encephalitis
c. Pneumonia
d. Myocarditis

- Testicular swelling and tenderness (orchitis) is the most common extrasalivary gland manifestation of mumps in adults. Develops in 25-40% of post pubertal male. Lower abdominal pain and ovarian enlargement suggest oophoritis, which occurs in 5% of post pubertal women.

42.In national immunization schedule of Nepal,

36.b. Circular	37.d. Systemic random sampling	38.d. 50%	39.b. Tetanus
	40.c. Standard mortality rate	41.a. Orchitis & Oophoritis	42.a. 3 times

pneumococcal conjugate vaccine is given:

a. 3 times
b. 2 times
c. 1 time
d. 1 time with multiple booster throughout the life

BCG: At birth or at first contact
OPV: 6, 10, 14 weeks of age
DPT-HepB-HiB: 6, 10, 14 weeks of age
IPV: 14 weeks of age
PCV: 6 weeks, 10 weeks and 9 months of age
MR: 9 and 15 months of age
Td: Pregnant women 2 doses
JE: 12 months of age

43. Which one of the following is NOT a socio-economic indicator:

a. Literacy rate
b. Family size
c. Housing
d. Life expectancy at birth

Following are the socio-economic indicators:

a. Level of unemployment
b. Dependency ratio
c. Rate of population increase
d. Per capita income
e. Family size
f. Literacy rates, especially female literacy rates
g. Housing
h. Per capita "calorie" availability

44. Study of time, place and person is called as:

a. Experimental epidemiology
b. Analytical epidemiology
c. Descriptive epidemiology
d. Randomized controlled trial

- Descriptive epidemiology: Description of disease in terms of time of occurrence, place and person
- Analytical epidemiology: Analyse the disease via case control or cohort studies
- Experimental epidemiology: These studies involves some active intervention or manipulation in the experimental group while making no change in the control group. RCT is a type of experimental study.

45. Colustrum is rich in the following constituents as compared to breast milk:

a. Minerals
b. Proteins
c. Fats
d. Carbohydrates

- Colustrum has higher protein, vitamin A, Sodium and chloride
- Colustrum has lower carbohydrate, fat and potassium than the breast milk.

ANSWERS

31.b. Paraffin test	32.c. 1964	33.b. Dessication
34.b. Drowning	35.a. Wearing clothes of opposite sex	36.b. Circular
37.d. Systemic random sampling	38.d. 50%	39.b. Tetanus
40.c. Standard mortality rate	41.a. Orchitis & Oophoritis	42.a. 3 times
43.d. Life expectancy at birth	44.c. Descriptive epidemiology	45.b. Proteins

46. Scrub typhus is transmitted by:

a. Mite
b. Louse
c. Flea
d. Tick

- Scrub Typhus is caused by Orientia tsutsugamushi (principally, a parasite of rodents). Vector is Trombiculid mites called Chiggers. Chiggers lives on vegetation but complete their maturation cycle by biting humans. Site of bite leaves a flat black eschar with regional lymphadenopathy. Doxycycline is drug of choice.

47. Maternal mortality ratio is calculated by:

a. Maternal deaths/1000 total births
b. Maternal deaths/1000 live births
c. Maternal deaths/100,000 live births
d. Maternal deaths/100,000 total birth

- Maternal mortality ratio: Number of maternal deaths during a given time period per 100,000 live births during the same time period
- Maternal mortality rate: Number of maternal deaths in a given period per 100,000 women of reproductive age during the same time period.

48. Confidence limit includes:

a. Range and standard deviation
b. Median and standard error
c. Mean and standard error
d. Mode and standard deviation

- The confidence limits are limits that extend to cover the range between the mean and the respective standard error or deviation.

49. Sanitation barrier implies:

a. Segregation of faeces
b. Personal hygiene
c. Elimination of flies
d. Water pollution

- The segregation of the excreta by imposing a barrier is called 'sanitation barrier'.

50. Iron and Folic acid supplementation forms

46.a. Mite	47.c. Maternal deaths/100,000 live births	48.c. Mean and standard error
49.a. Segregation of faeces	50.b. Specific protection	51.d. Bacteriological index

50.b. Specific protection	51.d. Bacteriological index

a. Health promotion
b. Specific protection
c. Primordial prevention
d. Primary prevention

Examples of specific protection are:-

☞ A child coming for OPV vaccine, Iron and folic acid supplementation to pregnant women, regular vitamin A and Albendazole prophylaxis programs, taking chemoprophylaxis during an epidemic of a disease like elephantiasis or meningococcal meningitis, etc.

51.Classification of leprosy depends on:

a. clinical history
b. Drug response
c. Morphological index
d. Bacteriological index

Medicine

52.A 5 year old boy with a past medical history of atopic dermatitis presented in emergency room with chest pain. On examination wheeze is heard. Blood pressure and heart rate is 110/86 mmHg, 82 bpm. Most likely diagnosis is:

a. Acute bronchitis b Chronic bronchitis
c. Asthma d. Bronchiolitis

☞ General cues to diagnosis here is 5/M, PMH of atopic dermatitis, Chest pain and wheeze. Bronchial asthma is the hyperresponsiveness of airways with bronchoconstriction, reversible airflow obstruction and bronchospasm due to degranulation of mast cell presensitized with allergen.

53.Hypocalcemia is characterized by all of the following features, EXCEPT:

a. Numbness and tingling of circum oral region
b. Hyperactivity tendon reflex
c. Shortening of QT interval in ECG
d. Carpopedal spasm

Features of Hypocalcemia:-

I. Neuromuscular irritability: Chvostek sign, Trousseau sign, Erb's sign, Paresthesia in circumoral and acral region, muscule stiffness, myalgias and spasms
II. Neuropsychiatric symptoms: Seizures, Mental retardation, anxiety, psychosis and irritability
III. CVS: Prolonged QT interval, CHF, arrhythmias, hypotension
IV. Autonomic symptoms: Biliary colic, Bronchospasm, Diaphoresis
V. Skeletal changes: Head- Craniotabes, Frontal and parietal bossing, widening of sutures, delayed closure of anterior fontanelle with later eruption of teeth in growing child. Chest- Pigeon chest, Rachitic rosary, Harrison's sulcus, Kyphoscoliosis. Extremities- Genu valgum/varum, pelvic deformity, epiphyseal enlargement
VI. Other symptoms: Dry and coarse skin, dermatitis, eczema, steatorrhoea, gastric achlorhydria

54.Lab parameters matching with hemophilia is:

a. increase aPTT and PT
b. increase aPTT, Normal PT
c. Normal aPTT, Normal PT
d. Normal aPTT, increase PT

☞ In Hemophilia, aPTT increases 2-3 times the upper limit. Platelet counts, bleeding time, prothrombin time and thrombin time all are normal

55.Not a diagnostic indicator of myocardial infarction:

a. Increased markers
b. Severe chest pain
c. Presence of risk factors
d. Positive ECG changes

☞ Severe dull aching central chest pain, Increased cardiac biomarkers like Mb, CPK MB and Cardiac troponins, ECG changes like ST elevation, Tall T waves and reciprocal changes in opposite leads all are diagnostic indicator of AMI. Mere presence of risk factor is not diagnostic for acute myocardial infarction.

56.CSF profile of patient with suspected meningitis revealed Glucose 40 mg/dL, protein 105 mg/dL. Lymphocyte predominant counts. Most likely diagnosis is:

a. Aseptic meningitis
b. Tubercular meningitis
c. Bacterial meningitis
d. Pseudotumour cerebri

☞ In aseptic meningitis, Glucose is normal, protein is elevated and lymphocytosis is present. In bacterial, glucose is low, protein is elevated and neutrophilia is present. In Tubercular, glucose is low, protein is elevated and lymphocytosis is present.

57.DOC of leishmaniasis (Kala-azar):

a. Sodium stibogluconate
b. Diethylcarbamazine
c. Ivermectin
d. Pyrimethamine

☞ DOC for Leishmaniasis : Sodium stibogluconate

52.c. Asthma	53.c. Shortening of QT interval in ECG	54.b increase aPTT, Normal PT
55.c. Presence of risk factors	56.b. Tubercular meningitis	57.a Sodium stibogluconate

- DOC for Ascariasis, Enteriobiasis and Trichuris: Albendazole
- DOC for Giardiasis, Trichomoniasis: Metronidazole
- DOC for Schistosomiasis: Praziquantel
- DOC for Filariasis: Diethylcarbamazine
- DOC for Onchocerciasis: Ivermectin

58. Fungus causing pneumonia in AIDS patient is:

a. Nocardia b. Pneumococcus
c. Coccidiomycoses d. Pneumocystis

- Fungus causing pneumonia in AIDS patient is Pneumocystis carinii also known as PCP.

59. Megaloblastic anemia in blind loop syndrome is due to:

a. Vitamin B12 malabsorption
b. Bacterial overgrowth
c. Frequent diarrhoea
d. Decreased iron intake

- Blind loop in the Upper intestine: Fat malabsorption → Steatorrhoea
- Blind loop in the lower intestine: Vitamin B12 deficiency → Megaloblastic anemia

60. Lab report of a patient shows decreased sodium, increased potassium with decreased glucose with some inclusion pigment. Most likely diagnosis is:

a. Cushing syndrome b. Addison disease
c. SIADH d. Conn's syndrome

Addison's Disease

- **Ad**renocortical **I**nsufficiency (primary)
- MC cause in Nepal: Adrenal TB, Other- Autoimmune
- Hyponatremia, Hyperkalemia, Hypotension, Hypoglycemia
- Cutaneous and mucosal pigmentation

ANSWERS

46.a. Mite	47.c. Maternal deaths/100,000 live births	48.c. Mean and standard error
49.a. Segregation of faeces	50.b. Specific protection	51.d. Bacteriological index
52.c. Asthma	53.c. Shortening of QT interval in ECG	54.b. increase aPTT, Normal PT
55.c. Presence of risk factors	56.b. Tubercular meningitis	57.a. Sodium stibogluconate
58.d. Pneumocystis	59.b. Bacterial overgrowth	60.b. Addison disease

61. A vegetarian person presented with pain and paresthesia in lower limbs. On examination her MCV is 110. Most likely cause is:

a. Iron deficiency
b. Vitamin B1 deficiency
c. Vitamin B12 deficiency
d. Vitamin C deficiency

- Normal MCV is 82-96fl. Since the MCV in this patient is 110, along with the pain and paresthesia, this is the case of Megaloblastic anemia. The impairment in DNA synthesis results in large erythroid precursors and red cells. Causes are usually Vitamin B12 or folate deficiency. The other features are giant metamyelocytes and hypersegmented neutrophils, megakaryocytes, macrocytosis, anisocytosis, poikilocytosis in peripheral blood smear.
- Vitamin B12 deficiency results in increase in Methylmalonyl CoA (as B12 is responsible for conversion of Methylmalonyl CoA to Succinyl CoA). The accumulation of Methylmalonyl CoA causes Subacute combined degeneration of cords (demyelination of dorsal and lateral tracts), which is responsible for neurologic symptoms.

62. A patient who has been treated for Parkinson's disease for about a year presents with purplish mottle changes to her skin. Which of the following is the most likely cause?

a. Amantadine b. Bromocriptine
c. Levodopa d. Pramipexole

- This is called livedo reticularis. This is the characteristic side effect of the drug Amantadine.

63. True statement about tuberculosis are following except:

a. Lymphadenitis is MC extrapulmonary manifestation
b. Growth of bacteria is more in solid media than liquid media
c. Defaulter is in CAT II
d. Cavitation is in secondary TB

Order of frequency in extrapulmonary TB:

- Lymph nodes > Pleura > GU tract > Bones and Joints > Meninges > Peritoneum > Pericardium
- Culture of TB bacilli is done in Solid Medias like LJ media, Middle brook media which results in the formation of rough, tough and buff colony in about 6-10 weeks. Whereas in liquid media like BACTEC the result is yielded within 24 hours
- Category II TB contains Relapse, Failure and Defaulter case

61.c. Vitamin B12 deficiency	62.a. Amantadine	63.b. Growth of bacteria is more in solid media than liquid media

64.a. Kaposi sarcoma	65.c. Hepatitis C	66.d. IgE
67.c. In UIP, acellular pertussis vaccine is used	68.a. No finding	69.c. Neuroblastoma

☞ Secondary TB also known as adult-type/ reactivation or post primary TB, usually is localized to apical and posterior segments of the upper lobe. Lung parenchyma shows small infiltrates to extensive cavitation. With cavity formation, liquefied necrotic content undergo bronchogenic spread resulting in satellite lesions within lungs that may in turn undergo cavitation.

64. Multifocal tumour of vascular origin in a patient of AIDS is:

a. Kaposi sarcoma b. Astrocytoma
c. Gastric carcinoma d. Primary CNS lymphoma

☞ Kaposi's sarcoma is a multicentric neoplasm of vascular origin consisting of multiple vascular nodules appear in skin, mucus membrane and viscera.

65. Chronic liver disease is caused by:

a. Hepatitis B b. Hepatitis A
c. Hepatitis C d. Hepatitis E

☞ Chronic liver disease is caused by Hepatitis B and C. Chronicity in B is occasional (1-10%), 90% in neonates. Chronicity in C is common 80-90%.

Pediatrics

66. Immunoglobulin raised in asthma is:

a. IgA b. IgG
c. IgM d. IgE

☞ IgE is raised in Asthma. Atopic bronchial asthma is the type 1 IgE mediated hypersensitivity reaction. It is triggered by the environmental allergens.

67. Which of the following is not true about pertussis?

a. Not C/I in child with stable neurological disorder
b. In UIP, whole cell pertussis vaccine is used
c. In UIP, acellular pertussis vaccine is used
d. Efficacy of pertussis vaccine is not 100%

☞ Acellular vaccine is expensive and offers no significant advantage over whole cell killed pertussis vaccine in term of efficacy. Hence, Whole cell killed pertussis vaccine continues to be the standard antigen combination in UIP.

68. A 5 years old child suffering from nephrotic syndrome is responding well to steroid therapy, What would be the most likely finding on light microscopy?

a. No finding
b. Basement membrane thickening
c. Hypercelluar glomeruli
d. Fusion of foot process

☞ Minimal change disease is the most common cause of nephrotic syndrome in the children. As the name suggest, there is no abnormality detectable in light microscopy of glomeruli. Electron-microscope shows fusion of foot processes. Minimal change disease shows very good response to the steroids.

69. Which is the commonest abdominal mass in neonates?

a. Wilm's tumor b. Polycystic kidney
c. Neuroblastoma d. Rhabdomyosarcoma

☞ The commonest intra-abdominal tumor in first two years of life: Neuroblastoma
☞ The commonest intra-abdominal tumor between 2-5 years of age: Wilm's Tumor
☞ The commonest intra-abdominal tumor in children is Neuroblastoma
☞ The commonest cause of abdominal mass in newborn is multiple dysplastic kidneys
☞ Most common neoplasm in children <2 yr: ALL
☞ Most common solid tumor in children: Brain tumors
☞ Most common inherited malignancy is: Retinoblastoma

70. Drug of choice in simple partial seizure is:

a. Phenytoin b. Valproic acid
c. Carbamazepine d. Phenobarbitone

☞ 1st line drug for Generalised tonic clonic seizure are valproic acid and carbamazepine
☞ 1st line drug for absence seizure is Ethosuximide
☞ 1st line drug for simple partial seizure is Carbamazepine

71. Neural tube defects are prevented by:

a. Pyridoxine b. Folic acid
c. Thiamine d. Iron

☞ Folic acid supplements during pregnancy has proved to prevent neural tube defects in the fetus.

72. Pseudohermaphroditism in a female child is most commonly due to:

a. 21-hydroxylase deficiency
b. 17- hydroxylase deficiency
c. 11-hydroxylase deficiency
d. 3-hydroxylase deficiency

☞ 21 alpha hydroxylase deficiency is the most common cause of ambiguous genitalia in a new born.

73. Which of the following is wrong statement?

a. Reiter's disease is HLA B27 +ve
b. Reiter's disease has RF +ve
c. Psoriasis involves DIP
d. Reiter's disease is RF –ve

☞ Reiter's syndrome, also known as reactive arthritis, is the classic triad of conjunctivitis, urethritis, and

70.c. Carbamazepine	71.b. Folic acid	72.a. 21-hydroxylase deficiency
73.b. Reiter's disease has RF +ve	74.d. 175 cal/kg	75.a. Testicular development - Pubic hair – Axillary hair – Beard

arthritis occurring after an infection, particularly those in the urogenital or gastrointestinal tract. HLA B27 is positive in Reiter's Syndrome. Psoriasis involves DIP.

74. Caloric supplementation required for a severly malnourished child (per kg-body weight) is:

a. 100 cal/Kg
b. 125 cal/kg
c. 150 cal/kg
d. 175 cal/kg

☞ Therapeutic diet should provide 200 Kcal/Kg/day for severely malnourished child.

75. Order of development of secondary sexual characteristic in male:

a. Testicular development - Pubic hair – Axillary hair – Beard
b. Pubic hair - Testicular development – axillary hair – Beard
c. Testicular development – beard – pubic hair – Axillary hair
d. Axillary hair – Beard – Pubic hair - Testicular development

ANSWERS

61.c. Vitamin B12 deficiency	62.a. Amantadine	63.b. Growth of bacteria is more in solid media than liquid media
64.a. Kaposi sarcoma	65.c. Hepatitis C	66.d. IgE
67.c. In UIP, acellular pertussis vaccine is used	68.a. No finding	69.c. Neuroblastoma
70.c. Carbamazepine	71.b. Folic acid	72.a. 21-hydroxylase deficiency
73.b. Reiter's disease has RF +ve	74.d. 175 cal/kg	75.a. Testicular development - Pubic hair – Axillary hair – Beard

Dermatology

76. A child presented with severe itching. On examination lesions like burrow and papules are seen in wrists and palms. Most likely diagnosis is:

a. Pediculosis
b. Psoriasis
c. Scabies
d. Lichen

☞ The scabies mites (Sarcoptes scabiei) burrows into the skin and lay their eggs in the tunnel. Family history is often positive. Most common site is interdigital space. Permethrin cream and Ivermectin is drug of choice.

77. Skin pigmentation and icthyosis like side effect are seen in:

a. Rifampicin
b. Clofazimine
c. Dapsone
d. Steroid

☞ Side effects of Clofazimine are: Reddish brown discoloration of skin, discoloration of hair and body secretion, dryness of skin and itching (Ichthyosis).

78. Tinea incognito is due to inappropriate use of system and topical:

a. Antibiotics
b. Antifungals
c. Steroids
d. Antivirals

☞ Fungal infection whose morphology is altered by the use of antibiotics is called Tinea incognito.

Psychiatry

79. An 11 year boy is restless all the time and is unable to concentrate in class. He is hardly ever in his seat and roams around the hall. The diagnosis is:

a. Attention deficit hyperactivity disorder
b. Conduct disorder
c. Depression
d. Schizophrenia

Attention deficit hyperactivity disorder:

☞ It is the most common neurobehavioural disorder in children (particularly boys). It is characterised by difficulty in paying attention, difficulty in controlling behavior and hyperactivity. For making the diagnosis, the behavior must begin before 7 years of age, be present for at least 6 months, be pervasive (present in at least 2 different settings) and impair the child's ability to function normally. The treatment involves combination of behavioral therapy and medications.

80. False perception without external stimulus is:

a. Illusion
b. Hallucination
c. Delirium
d. Delusion

☞ Hallucination: perception in the absence of stimulus
☞ Illusion: Misinterpretation of stimuli arising from the external objects
☞ Delusion: False unshakable belief, which is not amenable to reasoning and is not in keeping with the patients, socio-cultural and educational background.
☞ Delirium: Acute confusional state characterized by alteration in consciousness, orientation and perception

76.c. Scabies	77.b. Clofazimine	78.c. Steroids
79.a. Attention deficit hyperactivity disorder	80.b. Hallucination	81.b. Ulcerative colitis

Surgery

81. Lead pipe appearance of colon is seen in:

a. Tuberculosis b. Ulcerative colitis
c. Colon carcinoma d. Hirschprung disease

☞ Loss of haustrations and narrow contracted colon gives the appearance of lead pipe in case of ulcerative colitis.

82. A 72 year old man presented with dribbling of urine for few years. On digital rectal examination prostate is assymetrical, firm and nodular. On prostatic biopsy revealed some of these cells have left the glands and are beginning to invade the surrounding tissue. Most likely diagnosis is:

a. Benign prostatic hyperplasia
b. Carcinoma prostate
c. Prostatitis
d. Age related changes

☞ Clinical features of Ca prostate are bladder outlet obstruction and the features of bone metastasis. On digital rectal examination, prostate feels hard, nodular and irregular often with loss of median grooves. Biopsy shows loss of myoepithelial cell layer which normally surrounds the prostatic glands (Gleason). Glands here appear in confluence.

83. Commonest cause of surgical obstructive jaundice

a. CBD stone b. Sclerosing cholangitis
c. Carcinoma of liver d. Chronic cholecystitis

84. Staging of breast carcinoma with 6 cm size, with ipsilateral supraclavicular and axillary lymph node swelling without fixed to chest, hard and mobile.

a. T4N1M0 b. T3N2M0
c. T4N2M0 d. T4N3M0

TNM staging of Ca breast

Tumor:

T0 – No evidence of primary.
Tis – Carcinoma *in situ* (DCIS or LCIS)
T1— Tumour size < 2 cm in greatest diameter (T1a—0.1-0.5 cm; T1b—0.5-1.0 cm; T1c—1-2 cm).
T2 – Size 2-5 cm.
T3 – Size > 5 cm.
T4 – Tumour fixed to chest wall or skin (T4a—fixed to chest wall, T4b—fixed to skin)

Node:

NX – Nodes cannot be assessed.
N0 – No nodes.
N1 mic – Node with micrometasiasis.
N1 – Axillary nodes—ipsilateral, mobile, discrete.
N2 –
N2a – Axillary nodes—ipsilateral fixed to one another and other structures.
N2b – *Clinically apparent** and ipsilateral internal mammary nodes in the absence of clinically palpable axillary nodes.
* *Clinically apparent* means nodes detected by imaging/clinically/ pathologically.
N3 –
N3a – Spread to ipsilateral infraclavicular lymph nodes with or without axillary nodes.
N3b – Spread to ipsilateral internal mammary nodes and axillary nodes.
N3c – Spread to ipsilateral supraclavicular lymph nodes with/ without axillary or internal mammary nodes.

Metastasis:

MX – Metastases cannot be assessed.
M0 – No metastasis.
M1 – Distant Metastases.

85. After thyroidectomy, patient developed SOB, management is:

a. Transfer the patient to OT and remove stitch
b. Give nebulization
c. Transfuse blood
d. Do tracheostomy

☞ Neck swelling immediately after thyroid operation may cause shortness of breath. This is due to tension hematoma. In such case, transfer the patient back to OT and remove the stitch.

86. Varicocele is common on left testis because:

a. Left testicular vein drains into IVC which has high pressure
b. Left testicular vein drains into left renal vein which has high pressure
c. Left testis is situated lower
d. Rectum compresses testicular vein

Varicocele is more common on left testis because of the following reasons:

i) Left testicular vein enters the renal vein at a right angle
ii) Left testicular vein is overlaid by the descending colon (and not by rectum)
iii) Left renal vein passes anterior to the aorta and posterior to superior mesenteric artery. Thus left

82.b. Carcinoma prostate	**83.a.** CBD stone	**84.b.** T3N2M0
85.a. Transfer the patient to OT and remove stitch	**86.b.** Left testicular vein drains into left renal vein which has high pressure	**87.d.** Frontal bone osteomyelitis with overlying soft tissue swelling

renal vein may be compressed by these two arteries in the same fashion as by a nutcracker.

iv) The left common iliac vein is caused by the right common iliac artery and the increased pressure in the iliac vein, which drain into the internal iliac vein.

V) A renal carcinoma extending along the left renal vein may occlude the testicular vein

87. Pott's Puffy tumor is:

a. Malignant tumor of scalp
b. Swelling associated with Pott's spine
c. Swelling of ankle associated with Pott's fracture
d. Frontal bone osteomyelitis with overlying soft tissue swelling

88. Immediate management of a patient with multiple fracture and fluid loss includes the infusion of:

a. Blood b. Dextran
c. Normal saline d. Ringer lactate

89. Which of the following cutaneous malignancies do not metastasize through the lymphatics?

a. Squamous cell carcinoma
b. Basal cell carcinoma
c. Melanoma
d. Kaposi's sarcoma

☞ Basal cell carcinoma only metastasizes locally. It does not show distant metastasis.

90. A cauliflower like growth is common in which part of large intestine

a. Caecum b. Ascending colon
c. Transverse colon d. Descending colon

ANSWERS

76.c. Scabies	77.b. Clofazimine	78.c. Steroids
79.a. Attention deficit hyperactivity disorder	80.b. Hallucination	81.b. Ulcerative colitis
82.b. Carcinoma prostate	83.a. CBD stone	84.b. T3N2M0
85.a. Transfer the patient to OT and remove stitch	86.b. Left testicular vein drains into left renal vein which has high pressure	87.d. Frontal bone osteomyelitis with overlying soft tissue swelling
88.d. Ringer lactate	89.b. Basal cell carcinom	90.b. Ascending colon

91. One of the following will always present with billous vomiting.

a. Pyloric stenosis
b. Esophageal atresia
c. Atresia of the 3rd part of the duodenum
d. Malrotation of the gut

☞ The common bile duct opens into the 2nd part of duodenum. Atresia of the 3rd part of duodenum hence presents with vomiting containing bile. Malrotation of gut also presents with billous vomiting, however may sometime present with non billous vomiting as well.

92. What is the site of origin of Klatskin tumor?

a. Gall bladder b. Ampulla of vater
c. Bifurcation of CBD d. Pancreas

93. Causes of pancreatitis are all except:

a. Cystic fibrosis b. Chronic alcoholism
c. Hypocalcemia d. CBD stone

Hypercalcemia is the cause of acute pancreatitis.

Orthopedics

94. The common hematological disorder seen in association with avascular necrosis of femur is:

a. Thalassemia
b. G6PD deficiency
c. Hereditary spherocytosis
d. Sickle cell anemia

☞ Avascular necrosis is the disease resulting from the temporary or permanent loss of the blood supply to an area of the bone. Head of femur is the commonest bone to undergo avascular necrosis apart from Scaphoid and Talus.

☞ In Sickle cell anemia, there is increased tendency of sickle cell to get arrested during transit through microvasculature. This will lead to vasoccclusive crisis in various organs that also includes bones.

95. Most common nerve involvement in volkmann's ischemic contracture is:

a. Median nerve
b. Radial nerve
c. Ulnar nerve
d. Posterior interosseous nerve

96. The blood supply of the scaphoid is through the:

a. Proximal pole b. Tubercle
c. Waist d. Distal pole

☞ Blood supply to the scaphoid is through the distal pole. Vascular supply to the proximal pole is thus compromised in fractures through the waist. Avascular necrosis is thus the common complication following scaphoid fracture.

91.c. Atresia of the 3rd part of the duodenum	92.c. Bifurcation of CBD	93.c. Hypocalcemia
94.d. Sickle cell anemia	95.a. Median nerve	96.d. Distal pole

97.Ortolani test is done for:

a. Congenital dislocation of hip
b. Traumatic dislocation of hip
c. Rheumatoid arthritis
d. Tuberculous arthritis

☞ Ortolani and Barlow's tests are done to diagnose congenital dislocation of hip. Ortolani test is done in an attempt to reduce the dislocated hip whereas, barlow's test (remember *Baahaar lo*) is done in an attempt to dislocate the dislocatable hip.

98.Most common charcot's joints involved in diabetes mellitus are those of:

a. Shoulder b. Ankle
c. Knee d. Foot

☞ Charcot's joint is the neuropathic arthropathy, in which there is the osteoarthritis of the joint associated with the loss of pain sensation, proprioception or both. It is seen in diabetes mellitus, and knee joint is the most commonly involved joint.

99.Erosion of bone is seen with all of the following except:

a. Gout b. SLE
c. Psoriasis d. Rheumatoid arthritis

☞ Arthritis in SLE is non erosive. Deformity of the joint in arthritis is also rare, and if present is due to tendon damage and inflammation, not from the bone erosion (Jaccoud's Arthropathy).

Anesthesia

100.All of the following formulae are utilized for intubation of a child, except:

a. Approximate tube size (>1 year age) = Age/4 + 4
b. Length of the tube (oral intubation) = Age/2 + 12
c. Depth of the tube (nasal intubation) = Age/2 + 12.5
d. Child's weight 10-20 kg = LMA size X 2

101.Repeated use of halothane causes:

a. Hepatitis b. Encephalitis
c. Pancreatitis d. Bronchitis

☞ Repeated use of halothane causes halothane hepatitis. Atleast an interval of 3 months between exposures are required. Pathological lesion is the centrilobular necrosis of hepatocytes. They are seen more commonly in patients with coexisting autoimmune diseases.

102.Brain temperature is most accurately measured through:

a. Tympanic membrane
b. Nasopharynx
c. Scalp
d. Cornea

☞ Nasopharynx and tympanic membrane being closer to hypothalamus gives accurate measurement of brain temperature. Tympanic membrane is more accurate.

103.The advantage of using epidural opioids over local anesthetics are all except:

a. Less hemodynamic alteration
b. Sensory analgesia
c. Less frequent dosing
d. Respiratory depression

104.Concentration of Lidocaine used in spinal anesthesia:

a. 5% b. 3%
c. 2% d. 1%

☞ Lignocaine 5% is used in spinal anesthesia and 0.5% is used in epidural anesthesia

105.Drug causing malignant hyperthermia is:

a. Succinyl choline b. Dantrolene
c. Gallamine d. Ketamine

☞ Succinyl choline, Halothane, Isoflurane, Phenothiazine and tricyclic antidepressants can cause malignant hyperthermia in susceptible individuals. The drug of choice for treatment of malignant hypothermia is Dantrolene.

ANSWERS

91.c. Atresia of the 3rd part of the duodenum	**92.c. Bifurcation of CBD**	**93.c. Hypocalcemia**
94.d. Sickle cell anemia	**95.a. Median nerve**	**96.d. Distal pole**
97.a. Congenital dislocation of hip	**98.d. Foot**	**99.b. SLE**
100.c. Depth of the tube (nasal intubation) = Age/2 + 12.5	**101.a. Hepatitis**	**102.a. Tympanic membrane**
103.d. Respiratory depression	**104.a. 5%**	**105.a. Succinyl choline**

106.Maximum analgesic action is seen with:

a. Catecholamine b. Propofol
c. Ketamine d. Thiopentone

☞ Ketamine causes sedation and profound analgesia that extends even into the postoperative period.

107.Spinal anesthesia should be injected in the space between:

a. T12-L1 b. L1-L5
c. L3-L4 d. L5-S1

☞ Spinal anesthesia is injected in subarachnoid space between L2-L3 or L3-L4.

106.c. Ketamine	**107.c. L3-L4**	**108.a. Cornea**
109.b. Timolol	**110.d. Pirenzipine**	**111.a. Benign intracranial hypertension**
112.b. Sebaceous gland	**113.a. II and III**	**114.c. Angiofibroma**

Ophthalmology

108.Refractive power of approximately 42 diopter is seen with which part of eye:
a. Cornea b. Aqueous humor
c. Lens d. Retina

109.A patient on treatment for glaucoma develops blepharoconjunctivitis. The most likely drug to be implicated is:
a. Pilocarpine b. Timolol
c. Dipivefrine d. Steroids

☞ Timolol causes dryness, stinging sensation, blurred vision and blepharoconjunctivitis

110.All of the following are examples of mydriatics except:
a. Atropine b. Homatropine
c. Tropicamide d. Pirenzipine

☞ Atropine, Homatropine, Tropicamide, Cyclopentolate are the mydriatics commonly used.

111.A 40 year old lady presents with bilateral papilledema. CT scan shows normal ventricles. Diagnosis is:
a. Benign intracranial hypertension
b. Malignant hypertension
c. Papillus
d. Raised intraocular pressure

☞ Pseudotumor cerebri aka benign intracranial hypertension has the classic feature of papilledema in ophthalmoscopy, raised CSF pressure and normal sized ventricles.

112.Zeis gland is:
a. Sweat gland b. Sebaceous gland
c. Meibomian gland d. Endocrine gland

Glands of Eye:
Zeis gland- Large sebaceous glands
Molls gland- Sweat glands
Meibomian gland- Tarsal glands

113.Afferent and efferent of light reflex are:
a. II and III b. III and IV
c. III and VI d. II and VI

☞ In light reflex afferent pathway is optic nerve and efferent pathway is oculomotor nerve.

ENT

114.A 16 yr male presented with epistaxis. On examination, bright red mass is seen in posterior nasal cavity. The mass bleeds when it was accidentally touched during examination. Most likely diagnosis is:
a. Nasal polyp
b. Nasopharyngeal carcinoma
c. Angiofibroma
d. Inflammed waldeyer's ring

Nasopharyngeal angiofibroma:
☞ Benign, vascular neoplasms of nasopharynx. They are common in pubescent males. They cause recurrent epistaxis. Most common site is posterior part of nasal cavity close to sphenopalatine foramen. Biopsy is contraindicated. Investigation of choice is contrast enhanced CT. Surgery is the treatment of choice.

115.A 5 year old boy presented to emergency room with drooling of saliva and difficulty breathing. Stridor is present. Thumb sign is seen in lateral cervical x-ray. Most likely diagnosis is:
a. Laryngotracheobronchitis
b. Acute epiglottitis
c. Bronchitis
d. Bronchiolitis

Acute epiglottitis:
H. inflenzae type b is the causative agent. Most common cause of death is complete airway obstruction. Child prefers sitting position (Tripod sign). Lateral X ray shows swollen epiglottis (Thumb sign).

Points to remember-
Hot Potato voice- Quinsy
Median rhomboid glossitis- Candidiasis
Thumb sign- Epiglottitis
Hour glass sign- Subglottic edema
Seals bark cough- Croup
Steeple sign- Croup
Trench mouth- Vincent's angina

116.In which of the following tympanoplasty, tympanic membrane is kept on head of stapes:
a. Type IV b. Type III
c. Type I d. Type II

Type I tympanoplasty	Perforation of tympanic membrane is repaired with a graft (myringoplasty)
Type II tympanoplasty	As erosion of malleus is associated with perforation of the tympanic membrane the graft is placed on the remnant of malleus or on the incus
Type III tympanoplasty	As the malleus and incus are absent the graft is placed directly on the head of the stapes. This procedure is also known as columella tympanoplasty or myringostapediopexy
Type IV tympanoplasty	As only the foot plate of stapes is present, the graft is placed directly on the foot plate
Type V tympanoplasty	Round window is functioning but the foot plate of stapes is fixed. Another window is created on the horizontal semicircular canal and is covered with a graft (fenestration operation).

117.Stapedius muscle is supplied by:
a. CN III b. CN VI
c. CN VII d. CN IX

109.b. Timolol	110.d. Pirenzipine	111.a. Benign intracranial hypertension
112.b. Sebaceous gland	113.a. II and III	114.c. Angiofibroma

115.b 116.b 117.c

☞ Stapedius muscle situated in the middle ear is supplied by facial nerve. Its contraction reduces the amplitude of oscillation of the stapes and thus reduces the perceived loudness of the sound.

118. Commonest bone affected by otosclerosis is:

a. Malleus b. Incus
c. Stapes d. All are equally affected

Otosclerosis:

It is the autosomal dominant disease.
Begins in 'fossula antefenestrum"
Common in females
Family history positive
The most common cause of a progressive conductive hearing loss usually bilateral in an adult with a normal ear drum.
Disease of the bone of the otic capsule, with a predilection for the anterio part of the oval window.
Flamingo pink tympanic membrane seen
Paracusis willisii (ability to hear better in noisy environment)
Carhart's notch at 2000 Hz present
Gelle's test is done for otosclerosis
Stapedectomy is surgery of choice
Sodium fluoride is of benefit
Commonest site of otosclerosis is oval window
Commonest bone affected in otosclerosis is stapes

119. Recurrent laryngeal nerve is branch of:

a. CN VII b. CN IX
c. CN X d. CN VII

Gynecology and obstetrics

120. Dose of $MgSO_4$ in preeclampsia is:

a. 4gm IV loading dose, immediately followed by 10 gm IM and then by 5gm IM every 4 hours in alternate buttocks
b. 10 gm IV loading dose, immediately followed by 4 gm IM and then by 5 gm IM every 4 hours in alternating buttocks
c. 10 gm IV loading dose, immediately followed by 5 gm IM and then by 4 gm IM every 4 hours in alternating buttocks
d. 4 gm dose followed by a maintenance infusion of 10 g/hr by controlled infusion pump

ANSWERS

106.c. Ketamine	107.c. L3-L4	108.a. Cornea
109.b. Timolol	110.d. Pirenzipine	111.a. Benign intracranial hypertension
112.b. Sebaceous gland	113.a. II and III	114.c. Angiofibroma
115.b. Acute epiglottitis	116.b. Type III	117.c. CN VII
118.c. Stapes	119.c. CN X	120.a. 4gm IV loading dose, immediately followed by 10 gm IM and then by 5gm IM every 4 hours in alternate buttocks

121. The most common symptom associated with Adenomyosis is:

a. Infertility b. Menorrhagia
c. Hematometra d. Dyspareunia

☞ Adenomyosis is the presence of endometrial tissue in the myometrium of uterus.
☞ Classic triad- Menorrhagia, and an enlarged, boggy, symmetric uterus

122. Placenta previa is seen in all the following except:

a. Large placenta b. Previous CS scar
c. Primigravida d. Previous placenta previa

Placenta previa is the abnormal implantation of placenta usually near the cervical os.

Risk factors:

Prior CS
Grand multipara
Multiple gestations
Prior placenta previa

123. Mullerian duct anomaly may include the absence of any of the following except:

a. Uterus b. Vagina
c. Ovary d. Uterine tube

☞ Mullerian duct is a mesodermal derivative and gives rise to uterus and uterine tubes. It also forms mesodermal part of the vagina.

124. The most common complication of IUCD is:

a. Ectopic pregnancy b. Bleeding
c. Backache d. Cervical stenosis

☞ Most common complication of IUCD (either inert or medicated), is increased vaginal bleeding. Backache is the second most common.

125. Pyopagus is condition when fusion in twins occurs at:

a. Thorax b. Head
c. Back d. Pelvis

Pyopagus- Fusion at back
Thoracopagus- Fusion at thorax
Ischiopagus- Fusion at pelvis
Craniopagus- Fusion at head

121.b 122.c 123.c 124.b 125.c

126.Normal pH of adult vagina is (on average)

a. 4-5 b. 6-7
c. 7-8 d. 9-10

pH of normal adult vagina: 4.5-5.5
pH of pregnant vagina: 3.5-4.5

127.Best predictor of ovulation is:

a. Temperature b. Progesterone
c. Estrogen rise d. Morning sickness

☞ Best predictor of ovulation is: Preovulatory rise in progesterone
☞ LH surge precedes ovulation by 24 hours

128.A woman presents with amenorrhea of 2 months duration; lower abdominal pain, facial pallor fainting and shock. Diagnosis is:

a. Rupture ovarian cyst
b. Ruptured ectopic pregnancy
c. Threatened abortion
d. Septic abortion

Classic triad of ectopic pregnancy is:
Abdominal pain, amenorrhoea and vaginal bleeding

129.A patient complaints of post coital bleed; no growth is seen, on per speculum examination; next step should be:

a. Colposcopy biopsy b. Conisation
c. Repeat pap smear d. Culdoscopy

☞ Colposcopy allows 3D morphological inspection of the transformation zone under high magnification and binocular vision. It has a definite place in detecting suspicious lesion, localizing abnormal areas, as well as in obtaining biopsies from selected areas.

130.Most useful investigation in the first trimester to identify risk of fetal malformation in a fetus of a diabetic mother is:

a. Glycosylated Hb b. Ultrasound
c. MSAFP d. Amniocentesis

☞ HbA1C estimation before 14 weeks of gestation can predict risk of fetal malformation. Values less than 8.5% have less chance whereas more than 9.5% have greater chance of major congenital malformation.

ANSWERS

121.b Menorrhagia	122.c Primigravida	123.c. Ovary
124.b. Bleeding	125.c Back	126.a. 4-5
127.b. Progesterone	128.b. Ruptured ectopic pregnancy	129.a. Colposcopy biopsy
130.a. Glycosylated Hb		

Case 1

131.A 2 week old newborn in brought to the physician because his lips have turned blue on three occasions during feeding. His BP is 75/45, pulse is 170, and RR is 44. A grade 3/6, harsh, systolic ejection murmur is heard at the left upper sternal border.

Most likely diagnosis is:

a. ASD b. VSD
c. PDA d. ToF

132.What decreases cyanosis in such patients?

a. Knee hanging b. Squatting
c. Shaking d. Sneezing

133.Most likely findings seen in chest radiography of such patient is:

a. Oligemic lung field b. Lung plethora
c. Vessel pruning d. Mediastinal shift

134.Treatment choice of such patient is:

a. Observation
b. Supplemental O2 with reassurance
c. Immediate laparotomy
d. PGE1 and shunt operation

135.Effect of O2 supplementation on SpO2 in such patients is:

a. Increase in SpO2
b. No change in SpO2
c. Slight increase in SpO2
d. Decrease in SpO2

Tetralogy of Fallot:

It is the most common cyanotic congenital heart disease in children

Features are- **P**ulmonary Stenosis, **R**ight ventricular hypertrophy, **O**ver riding aorta, **Ve**ntricular septal defect**[@PROVe]**

Children often squat for relief during hypoxemic episodes called 'tet spells', which increases systemic vascular resistance, thus increasing blood flow to the pulmonary vasculature and improved oxygenation

Examination reveals a systolic ejection murmur at the left upper sternal border (right ventricular outflow obstruction), a right ventricular heave, and a single S2

CXR shows boot-shaped heart with decrease pulmonary vascular markings

Lesion with severe RV outflow obstruction require immediate PGE1 to keep the PDA open along with urgent surgical consultation. Treat hypercyanotic 'tet spells' with O2, propranolol, phenylephrine, the knee chest position, fluids and morphine.

Temporary palliation can be achieved through the creation of an artificial shunt (e.g balloon atrial septostomy) before definitive surgical correction (Blalock-Taussig Shunt).

ANSWERS

131.d. ToF	132.b. Squatting	133.a. Oligemic lung field
134.d. PGE1 and shuntoperation	135.a. Increase in SpO2	

Case 2

136.A patient has history of inguinal hernia for last 3 years. Now from last 2 days there is increase in size of hernia and had become painful. On examination, the hernia site is hot, tender. Patient already had 2 episodes of vomiting from last 2 days. Patient is febrile.
Most likely diagnosis is:
a. Strangulated hernia b. Obstructed hernia
c. Reversible hernia d. Infection of hernia sac

137.Most common hernia to be strangulated is:
a. Inguinal b. Femoral
c. Epigastric d. Umbilical

138.Not a boundary of Hesselbach triangle:
a. Inferior epigastric artery
b. Rectus abdominis
c. Inguinal ligament
d. Conjoint tendon

139.In direct Inguinal hernia, it lies at what position in relation to inferior epigastric artery?
a. Lateral b. Medial
c. Superior d. Inferior

140.Which of the following is an emergency condition?
a. Hydrocele b. Testicular mass
c. Orchitis d. Torsion of testis

Hernia:

Indirect Inguinal Hernia- Herniation of abdominal contents through both external and internal rings, lateral to inferior epigastric vessels. Results from congenital patent processus vaginalis. Most common type

Direct Inguinal Hernia- Herniation through floor of Hesselbach triangle (bounded by Rectus abdominis medially, Inferior epigastric artery laterally and Inguinal ligament inferiorly). Results from mechanical breakdown in transversalis fascia resulting from age.

Femoral Hernia- Herniation below inguinal ligament through femoral canal, below and lateral to the pubic tubercle. Results from increased intra-abdominal pressure, weakened pelvic floor. More common in female than male. Most common hernia to be strangulated.

ANSWERS

136.a. Strangulated hernia	137.b. Femoral	138.d. Conjoint tendon
139.b. Medial	140.d. Torsion of testis	

Case 3

141.A 45 years old obese woman presents in the ER with steady, severe, aching pain in the upper right quadrant that radiates to the right scapula. The onset was acute and occurred 30 minutes after lunch. She had nausea with vomiting. On physical exam, she noted that she stops breathing on deep palpation of the right quadrant. Laboratory studies show an absolute neutrophilic leukocystosis with a left shift.
Most likely diagnosis is:
a. Acute pancreatitis b. Acute cholecystitis
c. Acute appendicitis d. Ischemic colitis

142.Sign seen positive in above described condition is:
a. Rovsing's sign b. Psoas sign
c. Murphy's sign d. Cullen's sign

143.Treatment of choice in such condition is:
a. Exploratory laparotomy
b. Laparoscopic cholecystectomy
c. Image guided bladder decompression
d. Pain management only

144. False regarding mucocele in gall bladder:
a. Gall bladder filled with clear content
b. Commonly caused by an impacted stone in the neck of the gall baldder or in the cystic duct
c. Continuance of pain or persistence of tenderness for longer than 6 hours
d. No findings are obvious in USG

145.Cystic artery is branch of:
a. Hepatic artery b. Celiac trunk
c. Splenic artery d. Gastroduodenal artery

Acute Cholecystitis:

RUQ pain, Nausea, Vomiting and fever are the symptoms. Inspiratory arrest with deep palpation of RUQ may be seen -Murphy's sign. USG is the initial test. Management is NPO, IV antibiotics and IV fluids. Cholecystectomy is indicated.

Mucocele of gall bladder results from the prolonged obstruction of the cystic duct, usually by a large solitary calculus. Gall bladder lumen becomes progressively distended by mucus produced by mucosal epithelial cells. Cholecystectomy is indicated as empyema, perforation, or gangrene may complicate the condition.

Cystic artery is the branch of hepatic artery.

ANSWERS

141.b. Acute cholecystitis	142.c. Murphy's sign	143.b. Laparoscopic cholecystectomy
144.d. No findings are obvious in USG	145.a. Hepatic artery	

Case 4

146.Newly married female presented with amenorrhoea and acute pain in the right iliac fossa. CBC reveals N85% L12%. There is also h/o fever and weakness from lower back. On examination few blood traces are seen on PV.
Most likely diagnosis is:
a. Ectopic pregnancy b. PID
c. UTI d. Cyst rupture

147.Next best investigation is:
a. Beta HCG b. USG pelvis
c. CT pelvis d. Image guided aspiration

148.Treatment of choice is:
a. Medical + Surgical b. Medical only
c. Surgical only d. Observation

149.Most common risk factor for such condition is:
a. Early marriage b. Estrogen therapy
c. PID d. UTI

150.Best treatment for severe stress incontinence without prolapse is:
a. Pelvic floor exercise
b. Kelly's repair
c. Burch Colposuspension
d. Urethral collagen implant

Ectopic Pregnancy:
- Most often tubal, but can be abdominal, ovarian or cervical
- Present with abdominal pain and vaginal spotting/bleeding, although some patients are asymptomatic.
- Associated with etiologies that cause scarring to the fallopian tubes, including a history of PID, pelvic surgery, DES use, or endometriosis.
- The differential diagnosis includes surgical abdomen, abortion, ovarian torsion, PID, and ruputured ovarian cyst.
- Always approach a women of reproductive age presenting with abdominal pain as a ruptured ectopic pregnancy until proven otherwise. Look for a positive pregnancy test and a transvaginal usg showing an empty uterus. Confirm with a serial beta HCG without appropriated beta HCG doubling.
- Methotrexate is sufficient for small, unruptured tubal pregnancies.
- Surgical options include salpingectomy or salpingostomy with evacuation.

ANSWERS

146.a. Ectopic pregnancy	147. a. Beta HCG	148.a. Medical + Surgical
149.d. UTI	150.b. Kelly's repair	

Case 5

151.A 9 month old boy is brought to the emergency department due to a generalized tonic clonic seizure. The seizure lasted about 4 minutes. His temperature was measured to be 103F. He has no prior history of seizures. No neck rigidity is noted. Most likely diagnosis is:
a. Meningitis b. Febrile convulsion
c. Encephalitis d. Rabies

152.Next best management step is:
a. Send blood for culture
b. Do CT head
c. Do lumbar puncture
d. Observe

153.Drug of choice for seizure medication
a. Phenytoin b. Ethosuximide
c. Lorazepam d. Barbiturate

154.Aseptic meningitis is caused by:
a. Bacteria b. Virus
c. Fungus d. Parasite

155.Forced flexion of the neck elicits a reflex flexion of the hips. The sign is known as:
a. Kernig's sign b. Brudzinski's sign
c. Neck rigidity sign d. Forced flexion sign

Febrile Convulsions:
- Occur in children between 6 months to 5 years of age, who have no evidence of intracranial infection or other cause.
- Risk factors include rapid increase in temperature and a history of febrile seizures in close relative.
- Classified as simple or complex:-
  - **i) Simple:** Short duration (<15 minutes), generalized tonic-clonic seizure with 1 seizure in a 24 hour period. A high fever and fever onset within hours of the seizures are typical
  - **ii) Complex:** Long duration (>15 minutes) or focal seizure, or multiple seizure in a 24 hour period. A low grade fever for several days before seizure onset may be present.
- Always focus on finding a source of infection. So LP is done to rule out intracranial infection,
- No workup is necessary for first-time simple febrile seizures, and no lab studies are needed if presentation is consistent with febrile seizures in children >18 months of age.

Lorazepam is the drug of choice for seizure.
Aseptic meningitis is caused by virus.

Signs of meningeal irritation:
i) Neck stiffness – Flexing the patient's head gently until the chin touches chest causes spasm in the neck muscle and inability to do so
ii) Kernig's Sign – Flexing one of the patient's legs at the hip and knee, with your left hand place over the medial hamstrings and using your right hand to extend the knee while the hip is maintained in flexion, extension is resisted by spasms in hamstrings and other leg undergoes reflex flexion.
iii) Brudzinski's sign - Flexing the patient's head gently until the chin touches chest causes reflex fexion of hip and knee joint of both lower limbs.

ANSWERS

151.b. Febrile convulsion	152.c. Do lumbar puncture	153.c. Lorazepam
154.b. Virus	155.b. Brudzinski's sign	

Case 6

156.26 years old female presented with history of blood in urine and proteinuria. No history of recent respiratory or GI infections noted. On examination, non erosive arthritis and malar rash and leukopenia are also noted. Most likely diagnosis is:

a. SLE b. PSGN
c. Alport's Syndrome d. HIV nephropathy

157.Antibody against which component is seen in such condition:

a. dsDNA b. Microsome
c. IgA d. Mitochondria

158.Treatment of such condition is:

a. Surgery
b. Antibiotics
c. Steroid + Cyclophosphamide
d. Chlorambucil

159.Marker for drug induced lupus is:

a. Hormone b. Pro drug concentration
c. Ab against Histone d. CNS involvement

160.Low doses of aspirin therapy is essentially advised for all of the following conditions except:

a. SLE
b. IUGR
c. Post myocardial infarction
d. Pre eclampsia

SLE:

- A multisystem autoimmune disorder related to antibody- mediated cellular attack and deposition of antigen-antibody complexes.
- Usually affects women of childbearing age
- Presents with non specific symptoms such as fever, anorexia, weight loss, and symmetric joint pain.
- Presence of the 4 of the following criteria are likely to have SLE
  Discoid rash
  Oral ulcers
  Photosensitivity
  Arthritis
  Malar rash
  Immunologic criteria
  Neurologic symptoms
  Elevated ESR
  Renal disease
  ANA +
  Serositis (pleural or pericardial effusion)
  Hematologic abnormalities
  ANA is sensitive but not specific.
  Anti-dsDNA and Anti-Sm Ab are specific but not sensitive
  Drug-induced SLE: Antihistone antibodies are seen in 100% cases but are non specific
  Neonatal SLE: Associated with anti-Ro antibodies transmitted from mother to neonate
  T/t: NSAIDs for mild joint symptoms, corticosteroids for acute exacerbations, cyclophosphamide for severe cases of lupus nephritis.

ANSWERS

156.a. SLE	**157.a. dsDNA**	**158.c. Steroid + Cyclophosphamide**
159.c. Ab against Histone	**160.a. SLE**	

Case 7

161.A 9-year-old male basketball player presents to the pediatrician with a limp and knee pain. On examination his knee seems normal, however it is noted that he has some atrophy in his upper thigh, some asymmetry in leg length, and decreased range of motion in his left hip. Radiograph shows increased density in the femoral head.
Most likely diagnosis is:

a. Hip TB
b. Avascular necrosis of hip
c. Femur fracture
d. Septic arthritis

162.What other disease may cause such condition?

a. Hereditary spherocytosis
b. Sickle cell anemia
c. G6PD deficiency
d. Iron deficiency

163.Which other bone is also affected by similar mechanism?

a. Lunate b. Trapezoid
c. Scaphoid d. Hamate

164.Technetium bone scan shows:

a. Decreased uptake at epiphysis
b. Increased uptake at epiphysis
c. No changes seen
d. Can't be evaluated

165.The commonest complication of Colles' fracture is:

a. Malunion
b. Non-union
c. Sudeck's osteodystrophy
d. Stiffness of fingers

- Common site of avascular necrosis are:
  Head of femur
  Proximal pole of scaphoid
  Body of the talus
- In colles fracture, finger stiffness is the commonest complication; shoulder, wrist and elbow are the other joints which commonly gets stiff.

ANSWERS

161.b. Avascular necrosis of hip	**162.b. Sickle cell anemia**	**163.c. Scaphoid**
164.a. Decreased uptake at epiphysis	**165.d. Stiffness of fingers**	

Case 8

166.A fifty year old man presents in emergency ward with central chest pain. On examination his blood pressure is 90/60 mmHg and pulse is 106 per minute. He is pale and sweating profusely.
The most likely diagnosis is:
a. Esophagitis b. Myocardial infarction
c. Pericarditis d. Pneumothorax

167.Drug of choice for pain in this case is:
a. Morphine b. Diazepam
c. Fortwin d. NSAID

168. Enzyme appearing earliest is:
a. CPK b. LDH
c. SGOT d. SGPT

169.What is the most common cause of sudden death in such patient?
a. Ventricular tachycardia
b. PSVT
c. Ventricular fibrillation
d. AV block

170.Risk factors for the development of a myocardial infarction include all of the following, EXCEPT:
a. an elevated cholesterol level
b. a lack of exercise
c. alcohol abuse
d. an A-type personality

ANSWERS		
166.b. Myocardial infarction	**167.a.** Morphine	**168. a.** CPK
169.c. Ventricular fibrillation	**170.c.** alcohol abuse	

Case 9

171.A 40 years old diabetic man presents with history of sudden onset of pain in right loin which radiates towards right iliac fossa. It is associated with fever and vomiting. On examination tenderness is present in right loin.
The most likely diagnosis is:
a. Appendicitis b. Cholecystitis
c. Diverticulitis d. Pyelonephritis

172.Most specific urinary finding will be:
a. WBC cast b. Leucocyte esterase test
c. Nitrite test d. Bacteria in gram stain

173.The organism most frequent implicated as the cause of this condition is:
a. Pseudomonas species
b. Escherichia coli
c. Beta hemolytic streptococci
d. Proteus species

174.Which of the following patients can be safely treated as an outpatient?
a. A 75 year old diabetic female
b. A 20 year old 20 week pregnant female with mild abdominal cramping
c. A 30 year old female with persistent vomiting and fever
d. None of the above

175.Which of the following is most helpful in differentiating acute pyelonephritis from lower urinary tract infection?
a. Proteinuria
b. Hypertension
c. White cell casts in urine
d. Glomerular immune-complex deposition

ANSWERS		
171.d. Pyelonephritis	**172.a.** WBC cast	**173.b.** Escherichia coli
174.d. None of the above	**175.c.** White cell casts in urine	

Case 10

176.A 24 year old woman came to gynecologist with complain of secondary amenorrhoea, weight gain, acne, hirsutism and depression.
Which one of the following is the most likely diagnosis?
a. Cushing's syndrome
b. Late-onset congenital adrenal hyperplasia
c. Polycystic ovarian syndrome
d. Hypothalamic amenorrhea

177.In this case LH/FSH estimation has to be done in which part of the menstruation cycle
a. 1-4 days b. 8-10 days
c. 13-15 days d. 24-26 days

178.About polycystic ovary disease, wrong statement is:
a. Anovulation b. Decrease estrogen
c. Increase LH d. Increase testosterone

179.False regarding complete testicular feminization is:
a. Prelobular bulb
b. Presence of feminine breast
c. Primary amenorrhea
d. Blind vagina

180.Secondary amenorrhea after abortion due to intrauterine adhesions is seen in:
a. Uterine inertia b. Imperforate hymen
c. Bicornuate uterus d. Asherman's syndrome

Polycystic ovarian disease:
- Hirsutism, obesity, acne, acanthosis nigricans, infertility
- Associated with endometrial hyperplasia and endometrial cancer
- Increase testosterone
- Increase LH/FSH
- Bilaterally enlarged ovaries
- OCPS, metformin, clomiphene citrate and spironolactone is used in treatment.

ANSWERS		
176.c. Polycystic ovarian syndrome	**177.b.** 8-10 days	**178.b.** Decrease estrogen
179.a. Prelobular bulb	**180.d.** Asherman's syndrome	

NMCLE - MANGSHIR 2074

IMPORTANT MESSAGES

- *The questions are memory based.*
- *The questions were not presented in as easy manner as they have been presented here. The questions were lengthy.*
- *The questions were not separated as Anatomy, Physiology... as they have been presented here.*
- *Question Set was not mentioned in the question. But in fact there were many sets. In examination you will receive an envelope of question and answer sheet. The envelope bears your name and symbol number. So the set that you are going to solve is predetermined. So don't try to cheat from others answer sheet. If possible better ask questions, if you get a chance. But rare chance...*
- *Before solving CSQs, always read all the 5 questions at first (because you will get some hint from the subsequent questions.*
- *Friends, never miss a question to answer. Don't waste time in questions you don't know. Just go on...easy questions will come that are going to determine your result...best of luck]*

Anatomy:

1. Most static structure in medial compartment of knee is:

a. Anterior cruciate
b. Posterior cruciate
c. Medial collateral ligament
d. Medial meniscus

Ans:c
Explanation:

- This is supported by the fact that most of the clinical tests in knee joint are done by keeping medial collateral ligament as the fulcrum.

2. Which of the following is correct regarding change in fetal circulation:

a. Ductus venosum becomes ligamentum venosum
b. Foramen ovalis closes when the baby cries
c. Uterine arteries become lateral umbilical ligament
d. Ductus arteriosus closes immediately after birth

Ans: a
Explanation:

- Changes after birth
- Umbilical arteries: medial umbilical ligaments
- Umbilical vein: ligament tereshepatis(round ligament of liver)
- Urachus: median umbilical ligament
- Ductus venosus: ligamentous venosus
- Ductus arterious: ligamentous arterious
- Foramen ovalis: fossa ovalis
- Vitelline duct/omphalomesentric duct/ yolk stalk: Meckel's diverticulum

3. Sensory nerve supply to cornea is by:

a. Optic nerve
b. Facial nerve
c. Trigeminal nerve
d. Oculomotor nerve

Ans:c

4. Trigeminal nerve arises from:

a. Cerebrum
b. Mid brain
c. Pons
d. Medulla

Ans: c
Explanation:
Remember the mnemonic:

CE MI PONS MEDU
I,II: Cerebrum
III, IV: Midbrain
V-VIII: Pons
IX-XII: Medulla

5. Anterior septum is supplied by:

a. Rtcoronary artery
b. lt coronary artery
c. lt circumflex aretery
d. Coronary sinus

Ans:b
Explanation:

- Anterior septum: LAD (left anterior descending artery), a branch of lt coronary artery lt-left
- Posterior septum: posterior descending artery, a branch of rt coronary artery

6. Narcolepsy is due to lesion in

a. Hypothalamus
b. Olfactory bulb
c. Cerebral cortex
d. Medulla

Ans:a
Explanation:

- Narcolepsy is sleep disorder. Sleep is controlled by hypothalamus.
- **Functions of hypothalamus:**

@SEAT
S: Sleep, sex
E: Endocrine, emotions
A: appetite, autonomic
T: temperature, thirst

A note on narcolepsy:

- One of the commonest cause of hypersomnia

Hallmark: decreased REM latency
Classical tetrad:
Sleep attacks
Cataplexy: loss of muscle tone , so the pt may fall
Hallucinations:
- Hypnagogic hallucination: dream like state at onset of sleep
- Hypnopompic hallucination: dream like state during awakening

Sleep paralysis

Treatment:
- Drugs: amphetamine, antidepressants
- Forced naps at regular intervals during day

7. which is the strongest ligament of hip joint?
a. Iliofemoral b. Ischiofemoral
c. Pubofemoral d. Transacetabular

Ans: a

Explanation
☞ Iliofemoral is in fact the strongest ligament of the body.

Physiology

8. Normal ejection fraction is
a. 100% b. 60%
c. 40% d. 80%

Ans: b

Explanation:
EF: (SV/EDV)*100
=(70/120)*100
=58.33=60%

9. Second heart sound is due to
a. Opening of aortic and pulmonary valve
b. Closure of aortic and pulmonary valves
c. Opening of mitral and tricuspid valves
d. Closure of mitral and tricuspid valves

Ans: b
Explanation:
S1: Closure of atrioventricular valves (mitral and tricuspid)
S2: closure of pulmonary and aortic valves
Murmur: d/t turbulence of blood flow inside heart
Bruits: d/t turbulence of blood flow in arteries
Humm: d/t turbulence of blood flow in veins

Pharmacology:

10. Which causes decreased PT?
a. VitK b. Heparin
c. Warfarin d. Dicoumarol

Ans: a

Explanation:
☞ This is a tricky question. Most of us tend to think that 'what causes increased PT' has been asked, but the question is just opposite.
☞ Warfarin/dicoumarol: increases PT
☞ Heparin: increases aPTT

11. Which is contraindicated in G6PD deficiency?
a. Dapsone b. Cotrimoxazole
c. Chloroquine d. Penicillin

Ans: a

Explanation:
☞ Although chloroquine and cotrimoxazole are also contraindicated, Dapsone is the best answer.

12. Most serious side effect of propylthiouracil:
a. Leukopenia b. Agranulocytosis
c. Aplastic anaemia d. Pancytopenia

Ans: b
Explanation:
☞ Side effects of PTU are: GI upset, rash, joint pain, agranulocytosis
☞ Antithyroid drug of choice in pregnancy is Propylthiouracil(because it is more protein bound than carbimazole).

13. Mechanism of action of Aspirin in MI is:
a. Inhibition of TXA2 synthesis
b. Increase TXA2 synthesis
c. Inhibition of bradykinin synthesis
d. Inhibition of activation of coagulation factors

Ans: a
Explanation:
☞ By inhibiting TXA2 synthesis, platelet aggregation is inhibited.

14. Which of the following drugs does not cause galactorrhea?
a. Danazol b. Clomiphene
c. Metoclopramide d. Antipsychotics

Ans: a
Explanation:
☞ Although neither danazol nor clomiphene has been implicated to cause galactorrhea, the best option would be danazol (as danazol causes breast atrophy whereas clomiphene cause breast tenderness).

15. What is the mechanism of action of NSAID in case of suppression of inflammation?
a. Inhibits chemotaxis
b. Inhibits vasodilation
c. Inhibits diapedesis
d. Inhibits macrophage function

Ans: ?

Explanation:
☞ All a,b, c mechanisms have been mentioned in books.

Biochemistry:

16. Which of the following protein helps in coagulation?

a. fibrinogen b. fibrin
c. albumin d. globulin

Ans: a
Explanation:

- Fibrin: activated form of fibrinogen (however fibrinogen is the most suitable answer)
- Albumin: maintains plasma oncotic pressure
- Globulin: immune system

17. Which of the following does not take place in mitochondria?

a. Gluconeogenesis b. TCA
c. Fatty acid synthesis d. β-oxidation

Ans:c
Explanation:

Cycles	Site	Tissues
Glycolysis	Cytosol	Various
TCA/Citric acid cycle	Mitochondria	Various
Gluconeogenesis	1st mitochondria then cytosol	Liver, kidney
Glycogenesis	Cytosol	Liver , muscle
Glycogenolysis	Cytosol	Liver, muscle
HMP shunt / pentose phosphate pathway	Cytosol	Liver, adipose, adrenal, RBC, testis, lactating mammary gd
Urea cycle	1st mitochondria then cytosol	Liver
β-oxidation	1st cytosol then mitochondria	Various
FA synthesis	**Cytosol**	Liver, kidney, adipose, lactating mammary gd
Ketone bodies synthesis	Mitochondria	Liver
Ketone bodies utilization	Mitochondria	Various **(not in liver)**
Cholesterol synthesis	Cytosol	Liver, intestine

18. How much % of daily calorie should be fat?

a. 10-15 b. 15-20
c. 20-30 d. 30-40

Ans: c
Explanation:

- ***Reference: Satyanarayan's biochemistry, 3rd edition, PN 510***

19. Insulin increases the activity of which of the following enzyme?

a. glycogen synthetase
b. pyruvate carboxylase
c. phosphoenolpyruvatecarboxykinase
d. glucose-6-phosphatase

Ans: a
Explanation:

- Insulin increases the enzymes of anabolic pathway.
- Rest of the enzymes except (a) are enzymes of glycolysis(catabolic pathway).

20. Iron is absorbed in

a. Stomach b. Duodenum
c. Ileum d. Jejunum

Ans: b
Explanation:
@CID

- VitC and Iron are absorbed from Duodenum.
- Vit B12 is absorbed from terminal ileum.

Com Med

21. Which of the following is prominent feature of analytical studies?

a. Confounding
b. Randomization
c. Comparison groups
d. Analysis is done on the basis of logistic frame

Ans: d

22. IMR of Nepal according to 2016:

a. 46 per 1000 b. 40 per 1000
c. 44 per 1000 d. 32 per 1000

Ans: d
Explanation:

- Although according to census 2068/2011, IMR is 40.5, a/c NDHS 2016 IMR is 32 per 1000.
- Some important stats a/c to Census 2068/2011:

Parameters	Values
Total population	26494504
PGR	1.35%
Population doubling time	52 yrs
Population density	180 per sq km
Sex ratio	94.2
Child woman ratio	0.361
Median age	22.26
Dependency ratio	76%
Life expectancy	66.6 yrs
Literacy rate	65.9%
CBR	22.4/1000
GFR	96/1000
TFR	2.52 per woman
Contraceptive prevalence rate	49.7%
CDR	7.3/1000
IMR	40.5/1000
NMR	52.9/1000

23. Which of the following is not used to represent qualitative data?
a. Pie chart b. Pictodiagram
c. Spot map d. Histogram

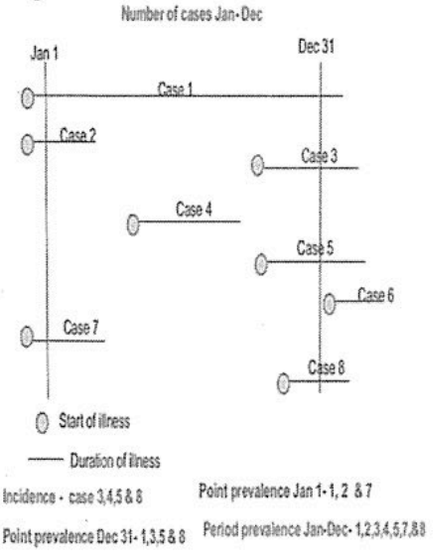
Ans: d
Explanation:
- **For qualitative(categorical) and discrete data:**
  Bar diagram
  Pie or sector diagram
  Pictodiagram
  Map diagram/ spot map
- **For quantitative/ continuous data:**
  Histogram
  Frequency polygon
  Frequency curve
  Line chart or graph
  Cumulative frequency diagram
  Scatter or dot diagram
  [reference: BK Mahajan's Biostat]

24. Which of the following is commonly used in hypothesis testing?
a. Mean and standard deviation
b. Median and standard deviation
c. Mode and standard deviation
d. Mean and median

Ans: a
Explanation:
- Parametric test (z, t test): parameters (mean, SD, proportion) are used
- Non parametric test (chi square): frequency is used

25. Period prevalence does not depend on:
a. duration of illness b. number of old cases
c. incidence d. duration of study

Ans: a
Explanation:
- Whether the disease last for few hrs or many days, all the patients are counted in period prevalence. Only point prevalence address the duration of disease.
- Also note: prevalence=incidence*duration of disease



26. Which of the following does not do analysis?
a. Descriptive study b. Cohort study
c. Case control study d. Prevalence study

Ans: a
Explanation:
A. Observational study
1. Descriptive study
2. Analytical study
   a. Case control study(case reference study): gives odds ratio
   b. Cohort study (follow up, prospective, longitudinal study): gives relative risk
   c. Cross sectional study(prevalence study): gives prevalence
   d. Ecological study (correlation study)

B. Experimental study
1. Randomised controlled trials (clinical trials)
2. Field trials (community intervention studies)
3. Community trial

27. Which of the following study is used to find prevalence of TB in a community?
a. Cohort study b. Cross sectional study
c. Case control study d. RCT

Ans: b
Explanation:
@Another name of cross sectional study is prevalence study.

28. The situation in which the investigator is not known about the identity of the participant is known as:
a. Anonymity b. Confidentiality
c. Blinding d. Matching

Ans: a
Explanation:
- **Anonymity:** the investigator is not known about the identity of the participant
- **Confidentiality:** the investigator knows the identity of the participant but does not discloses it to others
- **Blinding:** either the pt, data collector or the analysist does not know the statement of the study
  - ✓ **Single blind trial:** participant does not know ...
  - ✓ **Double blind trial:** participant and data collector don't know...
  - ✓ **Triple blind trial:** participant, data collector and analysist don't know...

FORENSIC

29. Most common type of finger print is:

a. Loop b. Whorl
c. Arcuate d. Double whorl

Ans: a

Explanation:

☞ *Reference Reddy's forensic*

30. A doctor attends his clinic by drinking alcohol. This is

a. Criminal negligence
b. Civil negligence
c. Professional misconduct
d. Ethics violation

Ans: c

Explanation:

☞ **Famous 6 A's not permitted:**

Alcoholism
Advertisement
Addiction
Association with unqualified person
Abortion
Adultery

31. Which of the following is most reliable to determine paternity?

a. DNA fingerprinting
b. Finger print
c. Blood group
d. External phenotype

Ans: a

Explanation:

☞ DNA fingerprinting is best way to determine paternity.
☞ Please keep in mind that even in monozygotic twins, finger prints are different

32. Instant rigor is seen in:

a. Cadaveric spasm b. Rigor mortis
c. Livor mortis d. Algor mortis

Ans: a

Explanation:

☞ Cadaveric spasm: spasm just after death as seen in case deaths d/t sudden emotional changes (fright), drowning, epilepsy
☞ Rigor mortis: it takes about 12 hrs, is d/t exhaustion of ATP stores in muscles
☞ Livor mortis: post mortem hypostasis/staining
☞ Algor mortis: post mortem cooling of the body

33. Which of the following is sharp injury?

a. Contusion
b. Slashes
c. Abrasion
d. Incised looking lacerated wound

Ans: b

Explanation:

☞ Blunt injuries:abrasion, contusion, laceration
☞ Sharp injuries: slashes/incision, penetration, perforation, punctured wound

OPHTHALMOLOGY:

34. A man develops pain, vomiting and painful sudden loss of vision on day 1 of eye surgery. Diagnosis is:

a. Acute congestive glaucoma
b. Acute iridocyclitis
c. Conjunctivitis
d. Endophthalmitis

Ans: d

Explanation:

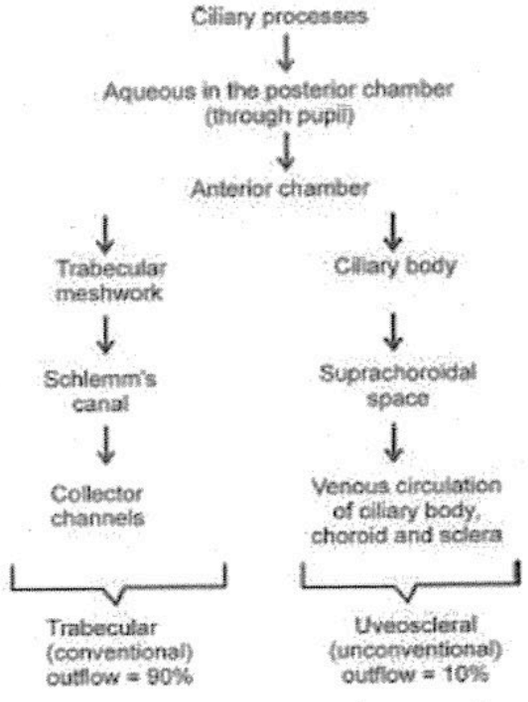
☞ Endophthalmitis is very common upto 7th day of surgery.

35. Aqueous humor is secreted by:

a. Epithelium of choroid
b. Iris
c. Cornea
d. Conjunctiva

Ans: a

Explanation:



Flow chart depicting drainage of aqueous humour

36. A patient suffering from cough and cold develops red eye with follicles in lower conjunctiva. The most likely organism is:

a. Adenovirus
b. Staphylococcus aureus
c. Streptococcus pyogens
d. Neisseria gonorrhea

Ans: a

Explanation:

☞ Prodomal symptoms of cough and cold along with follicles suggests of viral causative agent.

Sudden Sensorineural Hearing Loss (SSHL)

ENT:

37. Most common cause of congenital SNHL is:

a. Syphilis b. CMV
c. Toxoplasmosis d. Herpes

Ans: b

Explanation:

☞ Although all of the above can cause congenital SNHL, most common cause is CMV.

38. Main arterial supply of tonsil is :

a. Facial artery
b. Lingual artery
c. Ascending pharyngeal artery
d. Maxillary artery

Ans: a

Explanation:

☞ Main arterial supply of tonsil is tonsillar branch of facial artery.

39. Which of the following is not correct regarding vocal fold?

a. It has no lymphatic supply
b. Is lined by squamous epithelium
c. Has mucous gland
d. Cricothyroid is supplied by superior laryngeal nerve

Ans: c

Explanation:

☞ Note on vocal folds:

- No lymphatic supply
- Larynx is lined by pseudostratified epithelium except vocal folds which is lined by stratified squamous epithelium.
- No mucous gland
- All the muscles of larynx are supplied by recurrent laryngeal nerve except cricothyroid which is supplied by superior laryngeal nerve.

40. Which is correct regarding origin site of carcinoma of larynx?

a. epithelium b. mesenchymal
c. fibrous tissue d. muscles

Ans: a

Explanation:

☞ Most common carcinoma of larynx is squamous cell carcinoma which arises from lining epithelium.

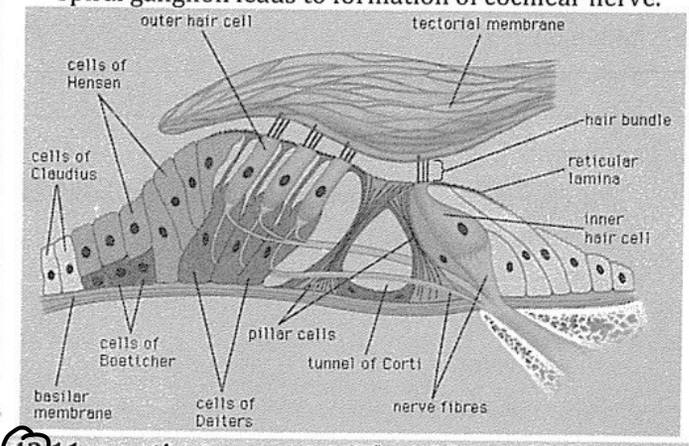
41. Outer most cell in cochlea near spiral ganglion is:

a. deiterscells
b. outer hair cells
c. inner hair cells
d. cells of Claudius

Ans: c

Explanation:

☞ Spiral ganglion leads to formation of cochlear nerve.



42. 11 yr patient presents with stridor and hoarseness of voice. The most likely diagnosis is :

a. laryngomalacia
b. recurrent respiratory papillomatosis
c. vocal cord paralysis.
d. congenital sub glottis stenosis

Ans: b

Explanation:

☞ recurrent respiratory papillomatosis: caused by HPV, acquired from mother at birth but presents clinically few yrs later.

☞ Laryngomalacia: only stridor, voice(cry) is normal i.e. no hoarseness

☞ Vocal cord paralysis: usually congenital, can be acquired

☞ Congential sub glottis stensis: only stridor, voice(cry) is normal i.e. no hoarseness

[Reference: Shrivastav's ENT]

43. Which of the following is true regarding tongue?

a. sensory supply is by trigeminal, facial and glossopharyngeal nerve
b. taste bud and papilla are same
c. taste buds act as chemoreceptor
d. taste papillae are spatially distributed

Ans: c
Explanation:

- Ans c is best although ans a is also suitable.
- Taste papillae: 4 types (filiform, fungiform, circumvallate, foliate)
- Taste buds sit on taste papillae. Taste buds act as chemoreceptors for gustatory sense.
- There are no taste buds on filiform papillae.
- Most numerous papillae are filiform papillae.
- Somato/general sensory supply: trigeminal(lingual), glossopharyngeal, vagus
- Gustatory/special sensory supply: facial (chorda tympani), glossopharyngeal, vagus
- All muscles of tongue are supplied by hypoglossal nerve except palatogolssus which is supplied by vagus nerve.

44. Correct regarding hard palate is?

a. lined by non-keratinized epithelium and does not contain minor salivary glands
b. lined by non-keratinized epithelium and contains minor salivary glands
c. lined by keratinized epithelium and does not contain minor salivary glands
d. linedby keratinized epithelium and contains minor salivary glands

Ans: b
Explanation:

- Non-keratinized epithelium arepresent in moist areas like oral cavity, vagina.
- Keratinized epithelium are present in dry areas like skin.
- Minor salivary glands distribution: oral mucosa, tonsils, peritonsillar space, soft palate, hard palate, tongue
- Weber's gland: minor salivary glands of peritonsillar space

45. During radical neck dissection, injury to internal jugular vein should be avoided. This is because of risk of which of the following serious complication?

a. hemorrhage b. air embolism
c. pneumothorax d. infection

Ans: b
Explanation:

- The confusion arises between hemorrhage and air embolism. One thing to keep in mind is that venous bleed is not as dangerous as arterial bleed.
- Radical neck dissection: removal of lymphnodes, sternocleidomastoid muscle, internal jugular vein and spinal accessory nerve
- Modified radical neck dissection: as radical neck dissection except one of the sternocleidomastoid, IJV or spinal accessory is preserved.

46. You notice that your patient's submandibular lymph nodes are enlarged. You would look for potential infection sites in the:

a. hard palate
b. hard palate and upper lip
c. hard palate, upper lip and upper central incisor
d. hard palate, upper lip, upper central incisor and lower first molar

Ans: d
Explanation:

- Drainage areas of sub mandibular gland are:
  - ✓ Maxillary sinus and maxillary teeth (except 3rd molar)
  - ✓ Mandibular canine, premolar, molar (except 3rd molar)
  - ✓ Floor of the mouth
  - ✓ Most of the tongue
  - ✓ Cheek
  - ✓ Hard palate
  - ✓ Anterior part of nasal cavity

ORTHOPAEDICS:

47. Medial meniscus is more likely to get injury because:

a. it is fixed by medial collateral ligament
b. it is semicircular
c. it lies anteriorly
d. it lies posteriorly

Ans: a
Explanation:

- Medial meniscus injury:
  - It is more common than lateral meniscus injury because it is fixed by medial collateral ligament making it relatively more immobile.
  - Injury usually occurs with twisting force (like while playing football).
  - Clinical scenario: sudden onset of pain while playing football...pain subsides and he continues to play...only to develop pain and swelling after several hrs
  - Treatment: rest in acute cases, if meniscus is dead then requires arthroscopic removal.

48. Most serious complication of arthroscopy?

a. hemorrhage in the joint
b. damage to articular cartilage
c. breakage of the instrument
d. infection

Ans: d
Explanation:
[reference: www.haustonmetodist.com]

- Most serious complications are knee joint infection and clot embolism.
- Breakage of instrument is minor complication and it will only increase the duration of the surgery.

49. Which of the following fracture does not need ORIF?

a. mid shaft of femur
b. intertrochanteric
c. pathological fracture
d. intra articular fracture

open reduction and internal fixation

Ans: a
Explanation:

- Choice of treatment for shaft of femur #: closed IMIL nail
  - ✓ <2 yrs: Gallow's traction
  - ✓ 2-16 yrs: TENS
  - ✓ >16 yrs: closed IMIL nail
- Intertrochanteric #:traction or DHS
- Neck of femur #: Austin Moore or Thompson Prosthesis or total hip replacement

intramedullary nail (IM nail)

50. A man died after 3 days of pelvic #. Most likely cause is:

a. hemorrhage
b. fat embolism
c. pulmonary embolism
d. infection

Ans: b
Explanation:

- Fat embolism is serious complication of both long bone and pelvic #.

[Reference:https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3669567]

- Hemorrhage is not the correct choice as death has occurred after 3 days.

51. Earliest change seen in case of fat embolism is :

a. lipuria
b. increase in serum lipase
c. increase in serum triglycerides
d. increase in serum cholesterol

Ans: a
Explanation:
Reference: Apley'sorthopaedics, 9th edition, pn 681

52. Which of the following is not correct regarding shoulder dislocation?

a. post dislocation is most common
b. requires repair of glenoid labrum
c. if there is dislocation during sleep, then surgery is most
d. damage to axillary nerve is more common

Ans: a
Explanation:

- Shoulder dislocation:
  - ✓ Anterior dislocation is common
  - ✓ Tests: Dugas test, Hamilton ruler test, Bryant's test, Callaways' test
  - ✓ Treatment: Kocher's maneuver, Bryant's repair, Putti-Platt operation
  - ✓ Shoulder is the most common jt in the body to get dislocated.
- Hip dislocation: posterior dislocation is common

MEDICINE

53. Most common cause of extrahepatic portal hypertension is:

a. umbilical sepsis
b. Buddchiari syndrome
c. liver cirrhosis
d. carcinoma of liver

Ans: a

54. USG classification of echinococcosis has become very popular. How many types are there?

a. 2
b. 3
c. 4
d. 5

Ans: d
Explanation:
[reference: Harrison's 19th edition, PN 1433]

- **5 types are:**
  - **CE1:** active cyst, visible cyst wall and internal echoes (snowflake sign)
  - **CE2:** active cyst, visible cyst wall and internal septation
  - **CE3:** transitional cyst (may have detached laminar membrane or may be partially collapsed)
  - **CE4:** inactive cyst, non homogenous mass
  - **CE5:** inactive cyst, cyst with thick calcified wall

55. Heat produced during cauterization does not increase with:

a. amount of current passing
b. thickness of tissue that is being cauterized
c. frequency
d. equal size of electrodes

Ans: d

56. USG uses high frequency wave sounds with pizzoelectric effect. Regarding USG all are true except:

a. medical USG uses 5-13 mHz
b. abdominal USG uses 3-7 mHz
c. higher the frequency, deeper the penetration and visualization
d. Doppler can detect blood flow

Ans: c
Explanation:
- Higher frequency is used to see superficial structures.
- Medical USG uses 3-13 (5-13 Mhz)

57. Which of the following is true regarding lignocaine?

a. lengthen the action potential
b. slows AV conduction
c. is class Ib antiarrhythmic agent
d. opens K+ channel

Ans: c
Explanation:
- Classification of antiarrhythmic drugs:

Class	MOA	Examples
I	Sodium channel blockers	
Ia	Lengthen action potential	Disopyramide
Ib	Shorten action potential	Lidocaine, mexilitine
Ic	No effect on duration of action potential	Flecanide, Propafenone
II	β blockers	Esmolol, atenolol, propanolol
III	K+ channel blockers, prolong action potential	Amiodarone, sotalol
IV	Calcium channel blockers	Verapamil, diltiazem

[reference: Kumar and Clarke's medicine, 8TH Edition, PN 712]

58. Which of the following is true regarding diabetes and gallstone?

a. prevalence of gallstone is similar in diabetic as compared to normal population
b. prevalence of gallstone is less in diabetic as compared to normal population
c. cholecystectomy should be considered in diabetic if it is symptomatic
d. asymptomatic gallstone in diabetic should be operated because there is high chance of gangrene

Ans:c
Explanation:
- Prevalence of gallstone is more in diabetic than non diabetics because of :
  - ✓ Associated neuropathy that causes bile stasis
  - ✓ Associated obesity in diabetes

59. Antidote of mushroom poisoning is :

a. atropine
b. physostigmine
c. carbachol
d. adrenaline

Ans: a
Explanation:
- Different antidotes are used for different classes of poisonous mushroom. Physostigmine is also an antidote for mushroom poisoning. However, most common effect of mushroom is cholinergic, so the antidote is atropine(anticholinergic).

Poisons	Antidote
Organophosphate	PAM, atropine
Mushroom	Atropine
Atropine, dhatura	Physostigmine
Benzodiazepine	Flumazenil
Methanol	Ethanol
PCM	N-acetyl-cysteine
Universal antidote	Charcoal(2 parts), MgO(1 part), Tannic acid (1 part)

60. Which is not correct regarding dengue?

a. arbovirus
b. transmitted by bite of mosquito
c. can be transmitted as air borne
d. treatment is supportive

Ans: c
Explanation:
- **Dengue fever:**
  - Also k/a break bone fever (d/t bone pain)
  - Also k/a saddle back fever (d/t reappearance of fever after initial remission of fever)
  - Causative agent: flavi virus family i.e. dengue virus I, II, III, IV
  - Transmitted by bite of female Aedes mosquito (A. aegypti, A. albopictus). All viruses transmitted by arthropods are known as arbovirus.
- **Serology:**
  - D1-D5: NS1 Ag(Non structural protein 1)
  - D5-D21: IgM ELISA
  - D6 onwards: IgG ELISA
- Treatment is supportive (PCM, fluids, rest).
- No aspirin/salicylate should be used.

61. Not transmitted by mosquito:

a. leishmania
b malaria
c. yellow fever
d. Japanese encephalitis

Ans: a
Explanation:

☞ Leishmania is transmitted by sandfly (Phlebotomusargentipes).

Disease	Causative agent	Vector
Malaria	Plasmodium sp.	Anopheles
Filariasis	Wuchereriabrancrofti	Culexquinquefasciatus
nia/ kala-azar	Leismaniadonovani	Sandfly
Dengue	Dengue virus (flavi virus)	Aedes
Japenese encephalitis	JE virus	Culextritaeniorhynchus
Yellow fever	Yellow fever virus (flavi virus)	Aedes
Srcubtyphus	Orientatsutsugamushi	Tormiculid mite

62. Hair on end appearance in x ray of skull is seen in:

a. fibrous dysplasia
b hydrocephalus with atrophic brain
c. hyperthyroidism
d. thalassemia minor

Ans: d
Explanation:

☞ Although hair on end appearance is feature of thalassemia major, it can also be sometimes seen in thalassemia minor.

☞ **Causes of hair on end appearance:**
@HI NEST (chronic anaemia)
H: Hereditary spherocytosis, Hyper parathyroidism
I: Iron deficiency anaemia
N: Neuroblastoma
E: Enzyme deficiency (G6PD)
S: Sickle cell anemia
T: Thalassemia major

63. Terry nails are not seen in:

a. diabetes
b. nephrotic syndrome
c. renal failure
d. cirrhosis of liver

Ans: b
Explanation:

☞ Terry nails: white with ground glass appearance
☞ Caused d/t decreased vascularity, increased connective tissue in nail bed
☞ **Causes:**
- Cirrhosis of liver (most imp)
- CCF
- Renal failure
- DM
- Hyperthyroidism
- Malnutrition

64. A patient has lab reports of increased TSH and normal T3, T4. What is the diagnosis?

a. subclinical hypothyroidism
b. clinical hypothyroidism
c. subclinical hyperthyroidism
d. clinical hyperthyroidism

Ans: a
Explanation:

Conditions	T3, T4	TSH
Subclinical hypothyroidism	N	Increased
Clinical hypothyroidism	Decreased	Increased (in primary), decreased (in secondary)
Subclinical hyperthyroidism	N	Decreased
Clinical hyperthyroidism	Increased	Decreased (in primary),increased (in secondary)

65. A patient has splinter hemorrhage in nail, painful nodules in hands and foot and murmur on echocardiogram. Diagnosis of infective endocarditis was made. Which of the following is correct?

a. blood culture should be repeated because it causes intermittent bacteremia
b. antibiotic concentration should be maintained for 6-8 wks
c. Most common organism in IVDUs is Streptococcus pneumoniae
d. arthralgia is major criteria

Ans: a,b
Explanation:

☞ both a and b are correct. Ans b seems to be more correct.
☞ Most common organism: Streptococcus viridans
☞ Most common in IVDUs: Staphylococcus aureus

66. What type of ulcer is seen in SLE?

a. painless lip ulcer
b. painful lip ulcer
c. painless palate ulcer
d. painful palate ulcer

Ans: c

Explanation:

- Oral cavity ulcer in SLE: 82% painless and 89% in palate.
- Drug induced SLE: marker is Anti-histone protein
- Alopecia type is: non scarring alopecia
- SLE is 9 times more common in female.
- No. of classes of SLE nephritis: 6
- Drug of choice for SLE nephritis is: Hydroxychloroquine

67. Which of the following is correct regarding congenital adrenal hyperplasia?

a. it is inherited as autosomal dominant pattern
b. increased cortisol
c. increased aldosterone
d. it causes female sexual ambiguity

Ans: d

Explanation:

- Note on CAH:
  - Autosomal recessive
  - 21 hydroxylase deficiency
  - Decreased cortisol and aldosterone
  - Increased androgen (differentiating feature with Addison's disease)
  - Causes sexual ambiguity in female (d/t increased androgen)

68. Which of the following indicates disease severity?

a. RF in RA
b. Anti ds DNA in SLE
c. ANA in SLE
d. Anti Sm Ab in SLE

Ans: b

Explanation:

- The combination of high ESR, high anti ds DNA, low C3 may herald a flare of dz in SLE. [Reference: Kumar and Clarke, 8th edition, PN 536]
- High titers of Anti ds DNA is SLE specific and in some patients corelate with disease activity.[Harrison's, 19th edition]

69. Which of the following does not causehyperkalemia?

a. Addison's disease
b. severe burn
c. acute renal failure
d. metabolic acidosis

Ans:

Explanation:

- In Addison's disease: there is adrenaline deficiency that leads to hypokalemia.
- Severe burn: water loss so hyperkalemia
- Metabolic acidosis: extracellular H+ exchanges with intracellular K+

70. In which of the following systolic murmur is not heard?

a. VSD
b. aortic regurgitation
c. hypertrophic cardiomyopathy
d. ASD

Ans: b

Explanation:

- Systolic murmur occurs in Aortic regurgitation as well, but the most suitable ans over here is AR as most common murmur of AR is diastolic murmur.
- Mid diastolic murmur: Mitral/tricuspid stenosis
- Early diastolic murmur: Aortic/ Pulmonary regurgitation
- Mid/ejection systolic murmur: Aortic/ Pulmonary stenosis, ASD
- Pan systolic murmur: Mitral/ tricuspid regurgitation, VSD
- Continuous/ machinery murmur: PDA

71. Thyroxine is given in which of the following conditions?

a. cretinism
b. endemic goiter
c. Graves disease
d. multinodular toxic goiter

Ans: a,b

Explanation:

- Both a, b are correct answers. But the question setting was like this. Best of luck!!!

72. Most common site of variceal bleed is:

a. oesophageal varices
b. gastric varices
c. rectal varices
d. anal varices

Ans: a

Explanation:

Reference: http://www.ncbi.nlm.nil.gov>pubmed

73. In which of the following TB steroid is used?

a. pleural effusion
b. pericardial effusion
c. adrenal
d. bone

Ans: c

Explanation:

- Although steroid is given in pericardial effusion as well, the best answer over here is adrenal TB. TB in adrenal gland leads to primary adrenal insufficiency, so steroid is must.
- If meningeal TB is given as option then meningeal Tb is the best answer.

74. Cushing syndrome is seen in which of the following cancer of lung?

a. squamous cell carcinoma
b. adenocarcinoma
c. small cell carcinoma
d. large cell carcinoma

Ans: c

Explanation:

- Lung carcinoma presents with many paraneoplastic syndromes (like Cushing syndrome, SIADH, LEMS)
- Most of them are produced by small cell carcinoma.
- To be remembered is: HYPERCALCEMIA IS PRODUCED BY SQUAMOUS CELL CARCINOMA.

75. Which of the following is seen in Graves disease?

a ophthalmoplegia b. cold intolerance
c. constipation d. bradycardia

Ans: a

Explanation:

- Others are features of hypothyroidism.

76. In which malarial infection RBC size is large?

a. Plasmodium vivax
b. Plasmodium ovale
c. Plasmodium malariae
d. Plasmodium falciparum

Ans: a

Explanation:

Features	P. vivax	P. ovale	P. falciparum	P. malariae
RBC affected	Young	Young	Any	Old
RBC size	Enlarged	Slight enlarged	Normal	Normal
Stipplings	Shuffner's granules	James dots	Maurer's dots	Zeeman's dots

DERMATOLOGY

77. A patient presents with heaped up crusts in wound. Removal of crusts reveals ulcer. What is the likely diagnosis?

a. impetigo b. ecthyma
c. cellulitis d. carbuncle

Ans: b

Explanation:

[reference: Neena Khanna's Dermatology]

- Most of us confuse with impetigo. The clue in the question is ulcer. Ecthyma is like deep impetigo, the removal of crusts reveals ulcer. In impetigo, the removal of crusts will usually reveal erosion only.

78. A girl repeatedly suffers from shortness of breath and localized rashes while eating sea foods. The symptoms subside within few hrs. What is the most likely diagnosis?

a. cell mediated hypersensitivity
b. antibody mediated hypersensitivity
c. antigen- antibody mediated hypersensitivity
d. localized anaphylactoid reaction

Ans: d

Explanation:

- The clinical features suggest of IgE mediated Type I hypersensitivity reaction, one of the example being localized anaphylactoid reaction.

Hypersensitivity reactions	Mediated by	Examples
Type I	IgE	Asthma. Anaphylaxis, urticaria, angioedema, hay fever, food allergy
Type II	Antibody mediated	Blood transfusion reactions, erythroblastosis fetalis, autoimmune hemolytic anaemia
Type III	Antigen-antibody immune complex mediated	Arthrus reaction, SLE, serum sickness, PSAGN
Type IV	Cell mediated, delayed	Allergic contact dermatitis, Mantoux reaction, graft rejection

79. Which of the following test is used to diagnose congenital syphilis?

a. TPHA b. IgM FTA-Abs
c. VDRL d. RPR

Ans: b

Explanation:

- Tests to diagnose congenital syphilis:
- Best method is antigen based test i.e.
  - ✓ Dark ground microscopy (1st choice answer)
  - ✓ Direct fluorescence antibody test (2nd choice answer)
- IgM FTA-Abs (3rd choice answer)

[references: Fitzpatrick's dermatology, Devinder Mohan Thappa's Dermatology]

PSYCHIATRY

80. Which of the following indicates poor prognosis in depression?

a. insomnia
b. advanced age of onset
c. presence of somatic symptoms
d. female

Ans: c

Explanation:

- Poor prognostic factors in depression:
  - Male
  - Early age of onset
  - Anxiety
  - Alcohol
  - Somatic symptoms (like headache, constipation)

81. Which of the following can cause life threatening withdrawal?

a. benzodiazipine b. opioids
c. PCP d cocaine

Ans: a

Explanation:

- Benzodiazepine withdrawal: anxiety, seizure, insomnia, **suicidal tendency.**
- PCP: no clear cut withdrawal symptoms
- No physical dependence is seen with: cannabis, cocaine and LSD
- No tolerance is seen with: cocaine

82. Pinpoint pupil is seen in poisoning of:

a. atropine b. opioid
c. alcohol d. benzodiazepine

Ans: b

Explanation:

- Pin point pupil is seen with opioids and cholinergic drugs/poisons like Physostigmine, Organophosphate poisoning.
- Atropine (anticholinergics) causes dilation of pupil.

SURGERY

83. Which of the following is not in WHO SAFE SURGERY checklist?

a. sign in b. sign out
c. time in d. time out

Ans: c

Explanation:

- Steps of WHO SAFE SURGERY check list is:
  - ✓ Prelist briefing: discussion on OT list
  - ✓ Sign in: PAC, any difficulty for anesthesia
  - ✓ Time out: before incision the surgeon discusses about any complication that may arise
  - ✓ Sign out: count the swabs/instruments, OT note, handover to recovery unit
  - ✓ Post list briefing

[Reference: Bailey and Love 26th edition]

84. Which of the following forms the floor of inguinal canal?

a. inguinal ligament
b. fascial transversalis
c. arcuate tendon
d. internal oblique muscle

Ans: a

Expianation:

Note on inguinal canal:

- Length: 3.75 cm
- Floor: inguinal ligament/Poupart's ligament/ external oblique aponeurosis
- Roof: conjoint tendon (internal oblique and transversus abdominis)
- Anterior boundary: external oblique aponeurosis
- Posterior boundary: transversalis fascia
- Deep inguinal ring: opening in transversalis fascia
- Superficial inguinal ring: formed by external oblique aponeurosis
- Inferior epigastric vessels separate direct and indirect/oblique inguinal hernia
- Pubic tubercle separates direct inguinal and femoral hernia
- Boundaries of Haesselbach's triangle (portion from which direct inguinal hernia arises)

- ✓ Medially: lateral border of rectus abdominis
- ✓ Laterally: inferior epigastric vessels
- ✓ Inferiorly: iliopubic tract (pubic bone)

☞ Contents of inguinal canal:

- ✓ Nerves: ilioinguinal, iliohypogastric, genital branch of genitofemoral nerve
- ✓ Spermatic cord (male), round ligament (female)

[Reference: Bailey and Love 26th edition]

85. Which of the following in not correct regarding Meckel's diverticulum?

a. it is 60 cm away from the ileocaecal junction
b. it contains all the layers of intestine
c. it is derived from vitellointestinal duct
d. it occurs in 5% of general population

Ans: d

Explanation:

☞ Meckel's diverticulum is remnant of omphalomesentric/ vitelline duct.
☞ Arise from antimesentric border.
☞ Contains all the layers of intestine (true diverticulum).
☞ **Rule of two:**

- Occurs in 2% of general population.
- 2 inches long
- 2 feet (60 cm) away from ileocaecal junction
- Meckel's diverticulum is differential diagnosis of acute appendicitis.

[Reference: Bailey and Love 26th edition]

86. Which of the following is not correct regarding intussusception?

a. it occurs in 2 mo to 2 yr child
b. most common form in ileocaecal
c. x ray is diagnosis of choice
d. most of the cases can be managed by reduction by air enema

Ans: c

Explanation:

☞ The best answer is c. Although X-ray is done, diagnosis usually depends on clinical scenario and USG (target sign).
☞ **Notes on intussusception:**

- 2 mo – 2 yr child
- Most common: ileocolic/ileocaecal

Symptoms:

- Pain/ screaming
- Distention
- Vomiting
- Red currant jelly stool

☞ Signs:

- Sign of dance: empty RIF
- Sausage shaped lump with concavity towards the umbilicus

☞ Investigations:

- Barium enema: claw sign
- X-ray: obstruction
- USG: target sign

☞ Treatment: hydrostatic reduction or reduction by air enema or surgery

[Reference: Bailey and Love 26th edition]

87. Apatient's endoscopy shows adenocarcinoma in stomach in stomach. Previous study some years back showed inflammation in the mucosa. The most likely cause is:

a. Helicobacter pylori
b. chronic alcoholism
c. adeno virus
d. human papilloma virus

Ans: a

Explanation:

☞ H.pylori causes chronic gastritis and Carcinoma of stomach.

88. Not a content of inguinal canal:

a. ilioinguinal nerve
b. iliohypogastric nerve
c. iliofemoral nerve
d. genital branch of genitofemoral nerve

Ans: c

Explanation:

☞ Contents of inguinal canal:

- Nerves: ilioinguinal, iliohypogastric, genital branch of genitofemoral nerve
- Spermatic cord (male), round ligament (female)

[Reference: Bailey and Love 26th edition]

89. Which of the following is not correct regarding biliary atresia?

a. affects intrahepatic ducts
b. affects extrahepatic ducts
c. presents with obstructive jaundice
d. treated by Kasai portoenterostomy

Ans: a

Explanation:

☞ biliary atresia usually affects extrahepatic ducts
☞ child presents with obstructive jaundice
☞ treatment: Kasai's hepatoportojejunostomy

[Reference: Bailey and Love 26th edition]

90. Which of the following is correct regarding antibiotic prophylaxis?

a. all admitted patients require antibiotic prophylaxis
b. should be given only after culture reports are available
c. should be given according to local guidelines
d. the broad spectrum of most new generation should be given

Ans:c

91. Which of the following is most correct regarding antibiotic prophylaxis before operation?

a. single stat dose should be given at the time of induction
b. vancomycin should be given within 1 hr of incision
c. antibiotics should be repeated after 2 hrs
d. antibiotic should be repeated in case of long operation and excess hemorrhage

Ans: a

Explanation:

Guidelines:

- antibiotics prophylaxis is given within 1 hr prior to surgical excision (at the time of induction)
- vancomycin should be given within 2 hrs prior to surgical excision
- Intra-operative re-dosing is necessary during procedures that exceed two half-lives(usually > 4 hrs operation) or if excess tissue handling is done.

92. Which of the following is not correct regarding chronic sub dural hematoma in elderly person?

a. common in case of old on anticoagulant therapy
b. presents as hypodense lesion
c. high velocity trauma is required to cause it
d. surgery may be deferred till coagulopathy becomes normal

Ans: c

Explanation:

- source of bleeding in sub dural hematoma: bridging veins
- CT scan appearance: crescentic shape
- acute (<3 days): high velocity trauma, hyperdense on CT, needs urgent evacuation
- sub acute (4-21 days)
- chronic (>21 days): usually trivial trauma in old pt on anticoagulant, iso/hyper/hypo dense on CT, surgery can be deferred till coagulopathy becomes normal

[Reference: Bailey and Love 26th edition]

93. Which of the following is correct regarding congenital hydrocele?

a. some form of mesh repair is required
b. occurs in remnant part of processus vaginalis
c. treatment is by Jaboulay's procedure
d. is always bilateral

Ans: b

Explanation:

- true congenital hydrocele occurs in remnant of processus vaginalis.
- It has communication with peritoneal cavity, so indirect inguinal hernia may be associated.
- Treatment is herniotomy.
- Treatment of primary hydrocele in adult is by Jaboulay's procedure.

[Reference: Bailey and Love 26th edition]

94. The best way to diagnose pneumoperitoneum is:

a. chest X ray supine
b. chest X ray erect
c. abdominal X ray supine
d. abdominal X ray erect

Ans: b

Explanation:

- Chest x ray erect will show gas under diaphragm.

ANAESTHESIA

95. Which of the following causes hyperthermia?

a. succinylcholine b. Haloperidol
c. Physostigmine d. opioids

Ans: a

Explanation:

- Succinylcholine is preferred choice over haloperidol although haloperidol also causes Neuroleptic Malignant syndrome.
- Drugs causing Malignant hyperthermia:
  - ✓ Succinylcholine (1st answer)
  - ✓ All inhalational agent (mainly Halothane)
  - ✓ LA (mainly lignocaine)

[reference: Ajay Yadav's anaesthesia]

96. Succinylcholine does not cross placenta because:

a. it is destroyed by placental acetylcholinesterase
b. it is highly ionized
c. it has high affinity to albumin
d. it has high molecular wt

Ans:b

97. A patient after general anesthesia woke up without reversal agent. Which of the following muscle relaxant does not require reversal agent?

a. Pancuronium
b. Gallamine
c. Vecuronium
d. Atracurium

Ans: d

Explanation:

☞ Atracurium is short acting.

98. A patient with severe systemic disease that limits activity falls under which grade of ASA?

a. II b. III
c. IV d. V

Ans: b

Explanation:

ASA grade	Description	e.g.
I	Normal healthy individual	-
II	Mild systemic dz	Mild DM, controlled HTN, obesity
III	Severe systemic dz that limits activity	COPD, stable angina, prior MI
IV	Dz with constant threat to life	Resp failure requiring ventilation, CHF, Renal failure, acute coronary syndrome
V	Not expected to live > 24 hrs	Ruptured aneurysm
VI	Brain dead pt (for organ donation)	-

99. Which of the following is not correct regarding Ketamine?

a. it inhibits Glutamate receptors
b. it is contraindicated in hypertension
c. it can be given by intramuscular route
d. it can be safely used in porphyria

Ans: d

Explanation:

☞ Ketamine:

- Is intravenous inducing agent (can also be given im)
- Inhibits NMDA type of Glutamate receptors
- Special conditions where it can be used:
  - ✓ Shock
  - ✓ Asthma
  - ✓ Sole agent for minor procedures (good analgesic)
- Contraindications:
  - ✓ Raised ICP (Head injury)
  - ✓ Raised IOP (glaucoma)
  - ✓ Hyperthyroidism, hypertension, muscle dystrophy, porphyria

100. Which of the following is correct?

a. atropine has more antisialagouge property than scopolamine
b. glycopyrrolate has more antisialagouge property than scopolamine
c. sedation is more with scopolamine
d. CNS toxicity is more with glycopyrrolate

Ans: c

Explanation:

Drugs	Atropine	Glycopyrrolate	Scopolamine
Antisialagouge	+	++	+++
Sedation and amnesia	0	0	+++
CNS toxicity	++	0	++

101. SpO_2 measures

a. oxygen saturation
b. partial pressure of O_2
c. oxyhemoglobin
d. hemoglobin content of blood

Ans: a

Explanation:

Note on SpO_2/SaO_2:

☞ Measures oxygen saturation.
☞ Normal arterial saturation is around 97%.
☞ Normal venous saturation: 75%
☞ Carboxy hemoglobin: shows 95% saturation
☞ Methhemoglobin: shows 85% saturation

PEDIATRICS:

102. A 11 girl presents with dry cough and fever of 101 F. She does not look so ill. Chest X-RAY shows B/L lung infiltrates in hilar region. Which is the antibiotic to be used?

a. Amoxicillin b. Azithromycin
c. Doxycycline d. Cotrimoxazole

Ans: b

Explanation:

- The clinical scenario is of atypical pneumonia. Both azithromycin and doxycycline are correct options, however in children d/t risk of skeletal and dental defectswith doxycycline, azithromycin is the best answer.

103. A child comes with episodes of loose stool with mild abdominal pain. What is the treatment of choice?

a. ORS b. ORS with Bifilac
c. Bifilac d. ORS with antibiotics

Ans: a

Explanation:

- The use of probiotics for prevention and therapy of diarrhea has been success in some settings although the evidence is inconsistence to recommend their use in all settings.

[reference: Nelson's Pediatrics, 1st South Asian edition, PN 1873]

104. Which of the following is correct regarding rheumatic fever?

a. severe joint inflammation may take several weeks to resolve
b. if there is arthralgia only then salicylate should be given
c. midazolam is the treatment of choice for Sydenham chorea
d. arthralgia is the major criteria

Ans: a

Explanation:

- Severe joint inflammation may take several weeks to resolve
- If arthralgia is the only clinical manifestation of presumed acute RF, then salicylate should be withheld as it may interfere with the development of characteristic migratory polyarthritis.
- Phenobarbitone is the drug of choice for Sydenham chorea
- Major criteria: [@CASES]
  - Carditis
  - Arthritis
  - Sydenham chorea
  - Erythema marginatum
  - Subcutaneous nodules
- Minor criteria:
  - Arthralgia, fever
  - Raised ESR or CRP, prolonged PR interval

Carditis
Arthritis
Subcutaneous n.
Erythema marg.
Chorea

[Reference: Nelson's Pediatrics]

105. Which of the following is true regarding HUS?

a. occurs commonly in case of E.coli treated with antibiotic
b. thrombocytosis
c. typical HUS is common in older age group
c. most common organism in South Asia is E.Coli O157:H7

Ans:a

Explanation:

- HUS has been seen to occur more if E.coli has been treated with antibiotics.

[reference:https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3659814]

- Features:
  - Microangiopathic hemolytic anaemia
  - Thrombocytopenia
  - Renal failure
  - Typical HUS: usually in children
    - ✓ E. coli O157:H7 is common
    - ✓ In south asia: S. dysentriae 1 is common
  - Atypical HUS: any age group, caused by different factors usually complement disorder

GYNECOLOGY AND OBSTETRICS

106. Which of the following is correct regarding appendicitis in pregnancy?

a. it should be managed conservatively
b. appendicitis can cause pre-termlabor
c. appendicitis in pregnancy presents with classical clinical features
d. less common in non-pregnant

Ans: b

Explanation:

- In pregnancy, appendix may be pushed upwards so pain may be felt in rt hypochondrium instead of RIF (not a classical feature)
- It can cause pre termlabour.
- Treatment consists of appendectomy at earliest.

[reference: Dutta's obstetrics, 7th edition, PN 304]

107. Most common organism of salpingitis is:

a. Chlamydia
b. Gonococcus
c. staphylococcus
d. Mycobacterium tuberculosis

Ans: ?a,b,d

Explanation:

- TB salpingitis is common in Nepal.
- Chlamydia, Gonococcus [William's Obstetrics, 3rd edition, PN 437]
- Classical salpingitis is associated with and secondary to Neisseria gonorrhoeae and Chlamydia is also commonly isolated. [Shaw's Gynecology]

We don't know from where did NMC select this question. So, best of luck!!!

108. Which of the following is correct regarding H. mole?

a. PSTT is best managed by chemotherapy
b. incidence of PSTT is <1% of all pts with GTN
c. 10 % molar pregnancy develops choriocarcinoma
d. metastatic lesions develop in 20% of pt after molar evacuation

Ans: b

Explanation:

- PSTT is treated by hysterectomy
- 3-5% of molar pregnancy develop choriocarcinoma
- metastatic lesions develop in 4% of pt after molar evacuation

[reference: Dutta's gynecology 7the edition, PN 298-299]

109. Most common cause of secondary amenorrhea is:

a. Prolactinemia
b. Sheehan syndrome
c. PCOS
d. stress

Ans: c

Explanation:

Common causes	% prevalence
PCOS	28
Stress	15
Hyperprolactinemia	13
Sheehan syndrome	2

[reference: william's gynecology, 3rd edition, PN 370]

110. Pelvis in which anterioposterior diameter is greater than transverse diameter is:

a. gynecoid
b. android
c. anthropoid
d. latypelloid

Ans: c

Explanation:

- Gynecoid: equal A-P and transverse diameter (round)
- Anthropoid: A-P > transverse (A-P oval)
- Android: triangular
- Platypelloid:A-P< transverse (transverse oval)

111. Which of the following is not correct regarding Krukenburg tumor?

a. it is always bilateral
b. histology shows signet ring appearance
c. most common primary site is pylorus of stomach
d. metastasis is by retrograde lymphatics

Ans: a

Explanation:

Note on krukenberg tumor

- Usually bilateral (not always)
- Primary sites
  - ✓ Stomach (70%): most commonly in pylorus
  - ✓ Large bowel
  - ✓ Breast
- Spread is by retrograde lymphatics
- Gross: smooth surface, slightly bossed, doesn't breaches the ovarian capsule
- Signet ring cells d/t high mucin content that pushes the nucleus to periphery
- Poor prognosis

112. Which of the following is most appropriate way to grade placenta previa?

a. transvaginal ultrasound
b. double set up examination
c. direct observation during CS
d. placental examination after CS

Ans: c

113. Which of the following is almost non-controversial statement?

a. once CS, always CS
b. previous CS, hospital delivery most
c. previous CS, come to hospital immediately
d. previous CS, home delivery

Ans: b

Explanation:

☞ Mandatory hospital delivery and individualization of the case. Admit at 38 wks.

[reference: Dutta, 7th edition, PN 329]

114. Which of the following is not used in pregnancy?

a. ACE inhibitor
b. Nifedipine
c. β- blocker
d. Methyldopa

Ans:a

Explanation:

☞ Antihypertensives used in pregnancy:[@ LMN H]
- ✓ Labetalol (β-blocker)
- ✓ Methyl dopa, clonidine
- ✓ Nifedipine
- ✓ Hydralazine

115. A patient came with missed abortion at 13 wks. Which is the most appropriate treatment?

a. suction and evacuation
b. oxytocin drip
c. misoprostol
d. expectant

Ans: c

Explanation:

☞ Misoprostol is more effective than oxytocin after 12 wks in case of missed abortion. [reference: Dutta, 7th edition, PN 164]

☞ Missed abortion is one in which the fetus is dead and retained within the uterine cavity for a variable period.

CLINICAL STRUCTURED QUESTIONS

A. An 8 yr old female child presents with abdominal pain, oligouria, facial puffiness and swelling of lower extremities. She also gives history of passing cola coloured urine.

116.Which is the probable diagnosis?

a. PSGN
b. HUS
c. PNH
d. Nephrotic syndrome

Ans: a

Explanation:

☞ Clinical scenario is of nephritic syndrome. Cola colored urine (hematuria) differentiates it from nephrotic syndrome.

117. What history will you try to extract from the patient party?

a. Recent skin infection
b. Coryza
c. Fever
d. Dyspnea

Ans: a

Explanation:

☞ PSGN is immune mediated reaction after infection by Streptococcus pyogens (GABHS). The infection may be skin infection (more common) or throat infection.

118. The most important test is

a. USG
b. Urinary protein
c. C3 level
d. RME for RBC casts

Ans: c

Explanation:

☞ PSGN is immune mediated reaction in which the complements are used up. So C3 level decreases.

119. The girl suddenly fainted, with vacant stare and stiffness of limbs. The most probable cause is

a. Epilepsy
b. Thromboembolic phenomenon
c. Hypertension
d. Hypoglycemia

Ans: c

Explanation:

☞ Please don't get confused with epilepsy. Had the option been seizure, seizure would have been the best option. But epilepsy is not the correct option as epilepsy is defined as multiple seizures with chronic underlying cause.

☞ In nephritic syndrome, hypertension and hypertensive encephalopathy may occur that may lead to seizure.

120. What is the most likely prognosis of given condition?

a. Usually good prognosis
b. Chronic renal failure
c. fatal
d. persistent hypertension

Ans:a

Explanation:

☞ Nephritic syndrome (PSGN) is usually acute condition and resolves within few days. Most important management is fluid restriction with input/output charting.

B. A patient visited OPD with complains of cough for few days, then he developed swelling around eyelids and now has mild edema in legs and mild abdominal distention.

121. What is the most likely diagnosis?

a. ARDS
b. Nephrotic syndrome
c. Congestive cardiac failure
d. DVT

Ans: b

Explanation:

☞ Initial swelling in periorbital region suggests edema d/t renal cause (here: nephrotic syndrome)

122. Which investigation will you do?

a. Urine albumin
b. Doppler study
c. ECG
d. Chest x ray

Ans: a

Explanation:

☞ In nephrotic syndrome, heavy proteinuria (>3.5 gm/day) occurs leading to hypoalbuminemia and edema.

123. Which one of the following forms one of the diagnostic criteria for the above-mentioned condition?

a. Decreased PaO_2/FiO_2
b. Bilateral infiltrates in chest X ray
c. Hypoalbuminemia
d. Hematuria

Ans: c

Explanation:

☞ If you were confused regarding diagnosis with ARDS, then this question helps to solve the problem as both the options a, b form the diagnostic criteria of ARDS. So, friends: before solving CSQs, always read all the 5 questions at first (because you will get some hint from the subsequent questions).

☞ Features of nephrotic syndrome are:

- Nephrotic range proteinuria (>3.5 gm/day)
- Hypoalbuminemia
- Edema
- Hyperlipidemia
- Thromboembolism (d/t loss of anticoagulant in urine)
- Chest infection (d/t loss of immunoglobulin in urine, usually by Streptococcus infection)

124. What is the treatment of the above condition?

a. Steroid
b. Positive pressure ventilation
c. Heparin
d. Diuretics

Ans: a

Explanation:

☞ Treatment of nephrotic syndrome:

- Prednisolone: 60 mg/m2/day for 4-6 wks then 40 mg/m2 on alternate days for next 4-6 wks then tapper by 5 mg/m2/wk
- Cyclophosphamide
- Cyclosporine
- Levamisole

125. Which of the following is not the complication of above condition?

a. Thromboembolism
b. Chest infection
c. Renal failure
d. Hypertension

Ans: d

Explanation:

☞ Complications of nephrotic syndrome:

- Spontaneous bacterial peritonitis (SBP)
- Thromboembolism (d/t loss of anticoagulant in urine), renal vein thrombosis
- Chest infection (d/t loss of immunoglobulin in urine, usually by Streptococcus infection)
- Some of the nephrotic syndrome may progress to renal failure (CKD).

C. A 25 yr patient presents with expansile, eccentric radiolucent mass at metaphyseal epiphyseal

junction near knee joint without invading surrounding structure for last 1 yr.

126. Which is not the differential diagnosis?

a. Giant cell tumor
b. Ewing's sarcoma
c. Simple bone cyst
d. Aneurysmal bone cyst

Ans: b

Explanation:

☞ Ewing's sarcoma is a marrow tumor and occurs in **diaphysis.** Most common age group of Ewing's sarcoma is 5-15 yrs.

127.What is the most probable diagnosis?

a. Aneurysmal bone cyst
b. Giant cell tumor
c. Hemangioma
d. Osteosarcoma

Ans: b

Explanation:

☞ The features match with both aneurysmal bone cyst (ABC) and giant cell tumor. However, involvement of both epiphysis and metaphysis is very characteristic of giant cell tumor.

[Reference: Apley'sOrthopaedics, 9th edition, PN 203]

128. All of the following are the common sites of above condition except:

a. Distal radius
b. Upper end of tibia
c. Sacrum
d. Upper end of humerus

Ans: c

Explanation:

☞ The most common sites of Giant cell tumor are:

- Distal femur
- Proximal tibia
- Proximal humerus
- Distal radius

[Reference: Apley'sOrthopaedics, 9th edition, PN 202]

129. Which of the following is most diagnostic test for the condition?

a. CT scan
b. X ray
c. Biopsy
d. Bone scan

Ans: c

Explanation:

☞ Biopsy is the usually the diagnostic investigation of any tumor. Biopsy of giant cell tumor reveals multinucleated giant cells.

[Reference: Apley'sOrthopaedics, 9th edition, PN 203]

130. What is the treatment of choice?

a. Conservative treatment
b. Chemotherapy
c. Amputation
d. Curettage and bone graft

Ans: d

Explanation:

☞ Treatment of giant cell tumor:

- Usually curettage and bone graft (packing with bone chips)
- Recurrent and more aggressive tumors: excision with bone grafting or prosthetic replacement.

[Reference: Apley'sOrthopaedics, 9th edition, PN 203]

D. A 35 yr female presents with lower abdominal pain for 8 months.

131.Most likely diagnosis is

a. Acute pelvic pain
b. Chronic pelvic pain
c. Ectopic pregnancy
d. Molar pregnancy

Ans: b

Explanation

☞ Chronic pelvic pain: acyclic pelvic pain lasting > 6 months.

[reference: Shaw's Gynecology 16th edition, PN 465]

132.What is the most common cause of chronic pelvic pain?

a. Fibroid
b. Endometriosis
c. Prolapsed uterus
d. Retroverted uterus

Ans: b

Explanation:

☞ Endometrosis accounts for 30-35 % of all causes of chronic pelvic pain.

[reference: Shaw's Gynecology 16th edition, PN 465]

133.Which one the following is not the treatment of endometriosis?

a. Medical
b. Medical and surgical
c. Expectant
d. Dilation and curettage

Ans: d

Explanation:

☞ Management of endometriosis:

- Asymptomatic minimal endometriosis: observe for 6-8 months, investigate infertility
- Symptomatic cases:
  - Drug treatment: OCP, Mirena, progesterone, androgen, GnRH analogue, Letrozole, RU-486
  - Minimal invasive surgery
  - laparatomy

[reference: Shaw's Gynecology 16th edition]

134.What complication can be caused by endometriosis?

a. Infertility
b. fibroid
c. choriocarcinoma
d. uterine prolapse

Ans:a

Explanation:

Infertility in endometrosis is due to dyspareunia, disturbed tubal motility, ovum may be engulfed by macrophages

135.Investigation of choice for endometriosis is:

a. USG
b. CT scan
c. MRI
d. Laparoscopy

Ans:d

E. A patient has been diagnosed with congestive heart failure and is prescribed with digoxin and furosemide. He is also diagnosed with BPAD and prescribed with lithium.

136.What are to be monitored in digoxin therapy?

a. Potassium and bicarbonate
b. Potassium and sodium
c. Potassium and hydrogen
d. Potassium and magnesium

Bipolar affective disorder (BPAD)

Ans: d

Explanation:

Reference: Across Pharmacology

137. Which of the following is true regarding interaction of lithium and furosemide?

a. Lithium potentiates the action of furosemide
b. Lithium decreases the action of furosemide
c. Furosemide potentiates the action of lithium
d. Furosemide decreases the action of lithium

Ans: c

Explanation:

☞ Furosemide causes water and sodium loss in urine. So the body's compensatory mechanism tries to reabsorb sodium from the PCT. Along with sodium, lithium also gets absorbed and the action of lithium is prolonged.

138. The patient suffers from infection and is prescribed with Netilmicin. Which of the side effect is increased in association with furosemide?

a. Neurotoxicity
b. Ototoxicity
c. Nephrotoxicity
d. Hepatotoxicity

Ans: b

Explanation:

☞ Netilmicin is aminoglycoside. Both aminoglycoside and furosemide are ototoxic drugs.

☞ Ototoxic drugs: [@ABCD]

- Aminoglycosides
- Beta blockers
- Chemotherapy
- Diuretics

F. Answer the following questions regarding hernia.

139. In European classification of hernia, R stands for

a. Right
b. Recurrent
c. Risk factor
d. Reducible

Ans: b

Explanation:

☞ European classification of hernia:
- Primary(P) or recurrent (R)
- Lateral (L), medial (M) or femoral (F)
- Defect size in finger breadth assumed to be 1.5 cm.
- e.g. primary indirect/lateral hernia with hernial orifice 3 cm will be PL2.

[Reference: Bailey and Love, 26th edition, PN 956]

140. Which of the following lies just lateral to inferior epigastric vessels?

a. Deep inguinal ring
b. Superficial inguinal ring
c. Haesselbach triangle
d. Femoral ring

Ans: a

Explanation:

☞ Inferior epigastric vessels is the landmark to separate lateral and medial hernia.

[Reference: Bailey and Love, 26th edition]

141. Which of the following operations does not require mesh?

a. Desarda procedure
b. Litchensen procedure
c. TEP
d. TAPP

Ans: a

Explanation:

Treatment options for inguinal hernia:

☞ Herniotomy

☞ Open suture repair
- Bassini
- Shouldice
- Desarda

☞ Open flat mesh repair
- Litchenstein

☞ Open complex mesh repair
- Plugs hernia system

☞ Open preperitoneal repair
- Stoppa

☞ Laparoscopic repair
- TEP (Total Extra Peritoneal)
- TAPP (Total Abdominal Pre Peritoneal)

[Reference: Bailey and Love, 26th edition]

142. Femoral hernia should be operated because

a. it is likely to get infected
b. it is large in size
c. it gets obstructed
d. it has high risk of being strangulated

Ans: d

Explanation:

☞ Femoral hernia has high risk of strangulation because of its narrow neck.

[Reference: Bailey and Love, 26th edition]

143. Which of these forms the landmark for separation of femoral hernia and inguinal hernia?

a. Pubic symphysis
b. Pubic tubercle
c. Superior epigastric vessels
d. Inferior epigastric vessels

Ans: b

Explanation:

☞ Direct inguinal hernia lies medial to pubic tubercle and femoral hernia lies lateral to pubic tubercle.

[Reference: Bailey and Love, 26th edition]

G. A mother presented to your OPD with her 7 month old baby with complains of fever 101F, cough and cold for 2 days for first time. On auscultation of chest, bilateral wheeze was present.

144. what is the most probable diagnosis?

a. bronchiolitis
b. bronchial asthma
c. pneumonia
d. bronchiectasis

Ans: a

Explanation:

☞ Wheeze might lead to confusion with asthma, but the first episode with presence of fever favors bronchiolitis.

145.What history will you take to rule out the differential diagnosis?

a. history of atopy
b. history of chest pain
c. siblings with stridor
d. family hx of URTI

Ans: a

Explanation:

☞ History of atopy(like skin allery, runny nose)may be present in asthma.

146. What investigation will you further do to rule out the other diagnosis?

a. pulmonary function test
b. Chest X ray
c. ABG
d. Sputum culture

Ans: b

Explanation:

☞ Chest X ray will show hyperinflated lung field with patchy atelectasis in bronchiolitis.

147. what will you give to the hign risk patient?

a. antibiotics
b. steroid
c. monoclonal antibody
d. ibuprofen

Ans: c

Explanation:

☞ Palivizumab is given in following conditions in acute bronchiolitis:

- Infants younger than 2 yrs of age
- Chronic lung disease
- History of prematurity
- Some forms of congenital heart disease

148. what is the appropriate management?

a. iv fluids
b. antibiotics
c. supportive
d. steroids

Ans:c

H. A patient presented with B/L proptosis, increased sweating, wt loss, palpitation. Diagnosis of Graves disease was made.

149. What is the reason of hyperthyroidism in Graves disease?

a. increased TSH
b. increased T3
c. increase T4
d. increased TSH Rab

Ans: d

Explanation:

☞ Graves disease is autoimmune disorder in which antibodies are formed against TSH receptor. These antibodies stimulate TSH receptor that leads to increased thyroxine synthesis.

150. what is the most common cause of unilateral proptosis?

a. Graves disease
b. Lymphoma
c. metastatic tumor
d. eningioma

Ans: a

Explanation:

☞ Graves disease is the most common cause of both unilateral and bilateral proptosis.

151. Which is the characteristic feature of Graves disease?

a. oculopathy
b. neuropathy
c. hoarseness of voice
d. tibial myxedema

Ans:a

152. which is not the treatment of Graves disease?

a. propylthiouracil
b. radioactive iodine
c. surgery
d. radiotherapy

Ans: d

153. which of the following viruses is implicated in Graves disease?

a. Yersinaenterocolitica bactcria
b. Yersinapestis
c. Mycoplasma
d. RSV

Ans: none

Explanation:

☞ EBV, Yersinia enterocolitica, E. Coli have been implicated in pathogenesis of Graves disease. Only option appropriate here is Yersinia enterocolitica, but is a bacterium (not virus). So, the options are wrong.

[Reference: Kumar and Clarke's Medicine, 8th edition, PN 964]

I. A patient presents with PV leakage for 1 day but she does not have labor pain. According to her she has already completed 39 wks. She is febrile and has mild abdominal pain.

154. what is the diagnosis?

a. PROM
b. preterm PROM
c. prolonged preterm PROM
d. term prolonged PROM

Ans: d

Explanation:

☞ Term: >37 completed wks
☞ Prolonged: > 24 hrs of rupture of membrane
☞ PROM: prelabor rupture of membrane

155. Which of the following statement is true?

a. the case is not complicated
b. the case is complicated because of preterm
c. the case is complicated because she has abdominal pain
d. the case is complicated because of two clear features of fever and abdominal pain

Ans:d

Explanation:

Fever and abdominal pain are supportive features of chorioamniotis.

156. what would you have done to prevent the case from being complicated?

a. started antibiotics
b. bring the patient immediately to hospital after rupture of membranes
c. nothing is required
d. give dexamethasone

Ans: b

Explanation:

☞ This step would have prevented the pt from going into chorioamniotis and subsequent infection in baby.

157.What is the next step in management?

a. buccal misoprostol
b. start antibiotics and wait
c. start antibiotics and then surgery
d. expectant

Ans: c

158. What is the complication if not managed in time?

a. chorioamniotis
b. preterm labour
c. uterine rupture
d. respiratory distress syndrome

Ans:a

J. A 17 yrs old girl was brought to ER with alleged history of ingestion of 25 tabs of paracetamol. She is conscious.

159. what is the lethal dose of Paracetamol?

a. 10 gm
b. 15 gm
c. 20 gm
d. 25 gm

Ans: d

Explanation:

☞ Fatal fulminant disease is usually (although not invariable) associated with ingestion of ≥ 25 gm.

[reference: Harrison's, 19th edition, PN 2027]

160. At what hour will you send serum PCM level ?

a. immediately
b. after 4 hrs
c. after 6 hrs
d. after 8 hrs

Ans: b

Explanation:

☞ Take blood for urgent estimation of the plasma concentration as soon as 4 hr or more have elapsed since ingestion.

[Reference: Kumar and Clarke's Medicine, 8th edition, PN 919]

161. The antidote is NAC. At what concentration of PCM in blood do you start NAC

a. 100 mcg/ml
b. 150 mcg/ml
c. 200 mcg/ml
d. 250 mcg/ml

Ans: a

Explanation:

N-acetylcysteine (NAC)

- At 4 hr: > 100 mcg/ml
- At 8 hr: > 200 mcg/ml

[reference: Harrison's 19th edition, PN 2027]

162. What is dose of NAC?

a. 70 mg/kg iv over 1 hr followed by 70 mg/kg every 4 hrs
b. 140 mg/kg iv over 30 min followed by 140 mg/kg every 4 hrs
c. 140 mg/kg iv over 1 hrfollowed by 70 mg/kg every 4 hrs
d. 100 mg/kg iv over 15 mins, 50mg/kg in 4hrs then infusion at 150mg/kg

Ans: d

Explanation:

- 2 guidelines:
  - Oral: 140 mg/kg loading dose followed by 70 mg/kg every 4 hrs for 17 more doses
  - 100 mg/kgiv over 15 mins, 50mg/kg in 4hrs then infusion at 150mg/kg

163. Which of the following is not the criteria of liver transplant?

a. hepatic encephalopathy
b. PT >100 sec
c. renal failure
d. AST >1000

Ans: d

Explanation:

- King's college criteria for liver transplant in acetaminophen/ PCM poisoning:
  - Arterial PH < 7.3
  - Coagulopathy: PT > 100 sec or INR > 6.5
  - Grade III or IV hepatic encephalopathy
  - Renal failure (creatinine >3mg/dl)

NMCLE - CHAITRA 2074

Anatomy

1. Cephalic vein drains into:

a. Basilic vein b. Axillary vein
c. Subclavian vein d. Brachiocephalic vein

Ans: b

☞ The **cephalic vein** runs up the lateral side of the arm from the hand to the shoulder. In the shoulder, it pierces the tissues and empties into the **axillary vein**. After the cephalic vein joins the axillary vein, it becomes the subclavian vein and empties into the superior vena cava.

2. Which of the following structure passes through oesophageal opening in diaphgram :

a. azygos vein b. vagus
c. Splanchic nerves d. thoracic duct

Ans:b

☞ The esophageal hiatus is an opening in the diaphragm through which the **esophagus and the vagus nerve** pass. It is located in the right crus, one of the two tendinous structures that connect the diaphragm to the spine. Fibers of the right crus cross one another below the hiatus.

Reference: Moore, KL; Agur, AMR; Dalley, AF (2011). Essential Clinical Anatomy. Lippincott Williams & Wilkins. p. 181. ISBN 978-1-60913-112-8.

3. The branches of the facial nerve are;temporal,buccal ,mandibular, cervical and which is the fifth one:

a. zygomatic
b. zygomaticofacial
c. zygomaticotemporal
d. supraorbital

Ans:a

Extracranial branches

Distal to stylomastoid foramen, the following nerves branch off the facial nerve:

A. Posterior auricular nerve – controls movements of some of the scalp muscles around the ear
B. Branch to Posterior belly of Digastric muscle as well as the Stylohyoid muscle
C. Five major facial branches (in parotid gland) – from top to bottom:
   - Temporal branch
   - Zygomatic branch
   - Buccal branch
   - Marginal mandibular branch
   - Cervical branch

4. White matter and grey matter is present in:

a. Basal ganglia b. forceps major
c. corpus callsum d. Limbic system

Ans: d

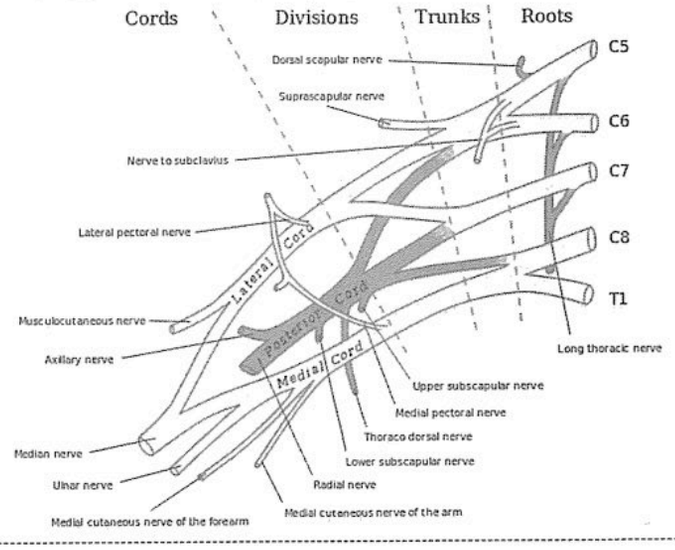
5. True about brachial plexus is :

a. roots originate from C5-T1
b. median nerve is orginated from lateral and posterior cord
c. it supplies the lower limb
d. root originate from C4-T1

ans: a

The way to remember is:

Real : Roots
Teacher: Trunk
Drink : Division
Chill: Cord
Beer: Branches



Physiology

1. In presence of vasopression most of the water is reabsorbed from:

a. PCT b. DCT
c. collecting duct d. Loop of Henle

Ans: a

☞ Although in question it is asked as in presence of ADH but most water reabsorption takes place in the proximal convoluted tubules, part of the nephrons in the kidney.

Water is reabsorbed by a process called osmosis; the diffusion of water from an area of high water potential to an area of low water potential through a partially permeable membrane. Very less amount of water is absorbed form distal convoluted tubule (DCT) and collecting duct (CD)where the ADH acts.

2. A women who is gaining weight, lethargic &is diagnosed as a case of hypothyroidism. Her TFT report is likely:

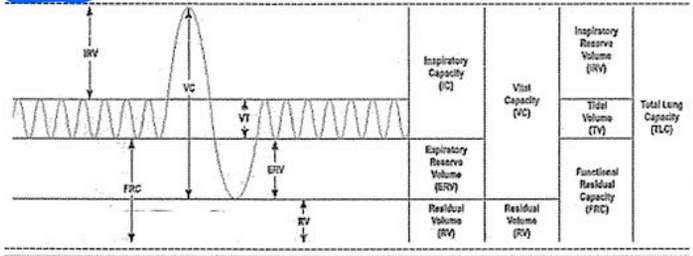
a. low TSH, high T_3, T_4.
b. High TSH, low T_3, T_4
c. High TSH, high T_3,T_4.
d. low TSH, low T_3, T_4.

Ans: b

☞ In hypothyroidism there is decreased T3, T4 level and from negative feedback mechanism there is increase in TSH. In subclinical hypothyroidism there is increase in TSH level but the amount of T3 and T4 is normal.

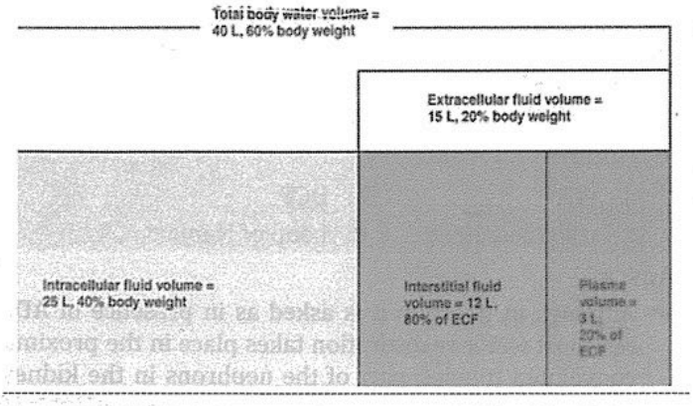
3. Tidal volume is calculated by:

a. Inspiraory capacity minus inspiratory reserve volume
b. Vital capacity minus IRV
c. TLC -VC
d. FRC-RV



4. True about ECF is:

a. It is 60% of body weight
b. Plasma is 1/4th of the ECF
c. ECF occupies 2/3rd of total water volume
d. ECF is rich in K than ICF.

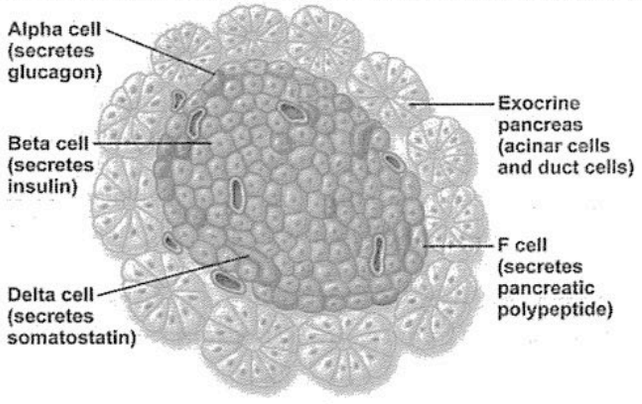


From the diagram it is clear that Plasma is **almost 1/4th** of the ECF

5. Delta cell of pancreas secretes:

a. Insulin
b. Glucagon
c. Somatostatin
d. Pancreatic polypeptide

Ans:c



The memory tip is A comes before B and G comes before I so,

↳ **A**lpha cells: **G**lucagon
Beta cells: **I**nsulin

Pathology

1. First body response to vessel injury is

a. Platelet plug
b. fibrin deposition
c. clotting cascade activation
d. vasoconstriction.

Ans: d

☞ Hemostasis or haemostasis is a process which causes bleeding to stop, meaning to keep blood within a damaged blood vessel. Hemostasis has three major steps:

1. **vasoconstriction,**
2. temporary blockage of a break by a platelet plug, and
3. blood coagulation, or formation of a fibrin clot.

2. Psammoma bodies are found in :

a. Medullary carcinoma
b. Anaplastic carcinoma
c. Papillary carcinoma
d. Follicular carcinoma

Ans: c

☞ Psammoma bodies: Laminated, concentric , calcific spherules seen in:

a. Papillary adenocarcinoma of thyroid
b. Serous papillary cystadenoma of ovary

c. Meniogioma
d. malignant mesothelioma

PSaMMoma
Papillary (thyroid)
Serous
Meningioma
Mesothelioma

3. Signet Ring cells are found In:
a. Plasma cells b. Fat cells
c. pigment cell d. foam cell

Ans: b

4. Cause of rubor is:
a. Increased vascular permeability
b. Arteriolar dilation
c. Stasis
d. endothelial injury

Ans: b

- Vasodilation is induced by the action of several mediators, notably histamine on vascular smooth muscle.Vasodilation first involves the arterioles and then leads to opening of new capillary beds in the area.This result in increased blood flow,which is the cause of heat and redness (erythema)at the site of inflammation.

Reference: Robbins Basis 9th edition page no. 73,74

5. About thyroid carcinoma which one is false:
a. Papillary Ca has worst diagnosis
b. Papillary carcinoma is the most common thyroid tumour
c. Thyroid carcinoma is most common carcinoma in woman
d. All

Ans:a

Papillary thyroid carcinoma :

- are the most common form of thyroid cancer
- Ground glass or Orphan Annie eye nuclei present
- Psammomabodies present
- Excellent prognosis

Reference: Robbins Basis 9th edition page no. 1095-1097

6. Pheochromocytoma is best diagnosed by:
a. VMA andmetanephrines
b. MRI
c. CT
d. USG

Ans: a

- Vanillylmandelic acid (VMA) is one of the breakdown products (metabolites) of epinephrine (adrenaline) and norepinephrine. Epinephrine and norepinephrine belong to a group ofsimilar hormones called catecholamines. This test measures the amount of VMA that is passed into the urine, typically over a 24-hour period, to detect excess epinephrine and norepinephrine. It is used to detect tumors called neuroblastomas and other neuroendocrine tumors.

Pharmacology

1. Drugs which binds to receptor but has no intrinsic activity :
a. Agonist b. Antagonist
c. Ligand d. Partial agonist

Ans:b

- An agonist is a chemical that binds to a receptor and activates the receptor to produce a biological response.
- A receptor antagonist is a type of receptor ligand or drug that blocks or dampens a biological response by binding to and blocking a receptor rather than activating it like an agonist.
- A ligand is a substance that forms a complex with a biomolecule to serve a biological purpose.
- Partial agonists are drugs that bind to and activate a given receptor, but have only partialefficacy at the receptor relative to a full agonist.

2. Pharmacovigilance is:
a. Monitoring toxicity of drug
b. Monitoring price of drug
c. Punishment to unauthorized medicine manufacturers
d. None

Ans: a

- **Pharmacovigilance** (PV or PhV), also known as **drug safety,** is the pharmacological science relating to the collection, detection, assessment, monitoring, and prevention of adverseeffectswith pharmaceutical products.

Microbiology

1. Hospital linens are sterlized by:
a. Hot air oven b. Autoclave
c. Gluteraldehyde d. Formaldehyde

Ans: b

- A medical autoclave is a device that **uses steam** to sterilize equipment and other objects. This means that all bacteria, viruses, fungi, and **spores** are inactivated. However, prions, such as those associated with Creutzfeldt–Jakob disease, and some toxins released by certain bacteria, such as Cereulide, may not be destroyed by autoclaving at the typical **134 °C for three minutes** or **121 °C for 15 minutes.**

2. Full blown AIDs is said to be present in:

a. Low viral titre, high CD_4 count.
b. High viral titre,low CD_4count
c. High viral titre ,high CD4 count
d. Low viral titre , low CD4 count

Ans: b

3. In month of January 8 months child presented with fever measuring 103°F for 3 days & fever subsided and measles like rashes appeared on 4thday.The likely diagnosis is :

a. Measles b. Rubella
c. HHV-6 infection d. Chickenpox

Ans: c

- Roseolainfantum is caused by Human herpesvirus type 6
- Typical symptoms include high grade fever that begins suddenly and sometimes a rash that develops after the temperature returns to normal.
- Most children who develop Roseola are between 6 months and 3 years of age.

Herpes viruses Classification

1. **Alpha herpesvirinae:**
   - Human herpesvirus 1, 2 (HSV - 1, HSV - 2)
   - Varicellovirus (HHV - 3 or VZV)
2. **Beta herpesvirinae:**
   - Cytomegalovirus (CMV),
   - Roseolovirus (HHV - 6, HHV - 7)
3. **Gamma herpesvirinae:**
   - Epstien - Barr virus (EBV),
   - Kaposi sarcoma associated virus (HHV - 8)

4. Which one is not a live vaccine :

a. Rabies b. DPT
c. MMR d. measles

Ans: a

- **Live attenuated:** Small pox, yellow fever, chickenpox, sabin polio virus and MMR.
- **Killed:** Rabies, Influenza, Polio,andHAV vaccines.(@ **RIP**Always)
- **Recombinant: HBV, HPV(6,11,16,18)**

5. Whichone does not give active immunity:

a. Rabies b. anti- tetanus toxin
c. BCG d. measles

Ans: b

6. Molluscumcontagiosum is caused by:

a. Pox virus b. HPV
c. Herpes d. EBV

Ans: a

- Molluscumcontagiosum, caused by Pox virus present as single or multiple**dome shaped**, waxy papules 2-5 mm in diameter that are umblicated.
- Diagnosis is made clinically by the **umblicated appearance**.
- The best treatment is curettage or application of liquid nitrogen .

7. Syphilis is caused by:

a. Treponemapallidum
b. Chalamydia
c. Gonococcus
d. Herpes simplex

Ans:a

- ***Treponemapallidum*** is a spirochaete bacterium with subspecies that cause the diseases **syphilis**, bejel, and yaws. It is a helically coiled microorganism usually 6–15 µm long and 0.1–0.2 µm wide.Thetreponemes have a cytoplasmic and an outer membrane. Using light microscopy, treponemes are visible only by using **dark field illumination**. They are **Gram negative**, but some regard them as too thin to be Gram stained.

8. Not transmitted by mosquito:

a. Dengue b. Malaria
c. Sleeping sickness d. Yellow fever

Ans:c

- **Sleeping sickness,** also called "human African trypanosomiasis", is a widespread tropical disease that can be fatal if not treated. It is spread by the bite of an infected **tsetse fly** (*Glossina* Genus), a species native to the African continent.

  The tsetse fly bite erupts into a **red sore** and within a few weeks the person can experience **fever, swollen lymph glands, aching muscles and joints, headaches and irritability.** In advanced stages, the disease attacks the central nervous system and people present with changes in personality, alteration of the biological clock (the circadian rhythm), confusion, slurred speech, seizures and difficulty in walking and talking. These problems can develop over many years and if not treated, the person dies.

  Reference: *http://www.who.int/features/qa/52/en/*

Community Medicine

1. Confounding bias is eliminated by:

a. Randomization b. matching
c. Blind trial d. proper selection

Ans:b

- **Bias**: A systematic error in the design, recruitment, data collection or analysis that results in a mistaken

estimation of the true effect of the exposure and the outcome.

- **Confounding:** A situation in which the effect or association between an exposure and outcome is distorted by the presence of another variable. *Positive* confounding (when the observed association is biased away from the null) and *negative* confounding (when the observed association is biased toward the null) both occur.

2. **Number of new cases in a point of time to the total population at that time is :**
   a. Incidence density b. Point prevalence
   c. Incidence rate d. Prevalence

Ans: c

3. **Infant mortality rate in Nepal according to NDHS 2016 is :**
   a. 21 per 1000 b. 22 per 1000
   c. 23 per 1000 d. 24 per 1000

Ans:a

According to NDHS 2016:

- Neonatal mortality Rate is 21 per 1000 live births
- Infant mortality Rate is 32 per 1000 live births
- Under 5 mortality Rate is 39 per 1000 live births

4. **Which one is false regarding Baby friendly hospital :**
   a. Mother & baby together throughout 24 hours
   b. Breast feeding within 1-4 hours
   c. Breastfeeding every 4 hourly
   d. All

Ans: c

- Time is not fixed for breastfeeding but mother should feed her baby when the baby wants not four hourly.

5. **In growth chart , which measurement tool is used :**
   a. percentiles b. decibels
   c. standard deviation d. Mean

Ans:a

6. **Overweight is defined as:**
   a. BMI>20 b. BMI>25
   c. BMI>30 d. BMI>28.5

Ans:b

Normal: 18-24.9 kg/m2
Overweight: 25-29.9 kg/m2
Obese: >30 kg/m2

7. **Disease present in all the seasons of a country is:**
   a. sporadic b. endemic
   c. pandemic d. epidemic

Ans:b

Endemic: The usual, the expected rate of disease over time the disease is maintained without much variation within a region.

Epidemic: Occurance of a disease in excess of the expected date;usually presents in a larger geographic span than endemics.

Pandemic: Worldwide epidemic

Reference: *Kaplan USMLE step 1 Behavioral Science and Social Science Page 3.*

Forensic

1. **Medial jurisprudence is**
   a. Protecting health professionals
   b. Legal aspects of medical field
   c. Autopsy of a dead body
   d. Study of age of bone

Ans:b

- **Medical jurisprudence** or legal medicine is the branch of science and medicine involving the study and application of scientific and medical knowledge to legal problems, such as inquests, and in the field of law.

2. **Viscera are stored in:**
   a. Saturated NaCl b. Unsaturated Nacl
   c. Concentrated Nacl d. Diluted Nacl

Ans: a

- Viscera are stored in saturated sodium chloride solution, except in poisoning from corrosive acids except phenol, alkalis, corrosive sublimate, and aconite.
- Ten. mg./ml of sodium or potassium fluoride (enzyme inhibitor) and 3 mg. potassium oxalate should be used for preserving blood.
- In suspected poisoning viscera stored are:
  1. stomach and its content
  2. both longitudinal half of kidney
  3. part of liver
- The viscera are handed over to the police.

3. **Mummification is :**
   a. Modified decomposition
   b. Putrefaction
   c. Adipocere formation
   d. None

Ans: a

- **Mummification** is a process which typically occurs in **warm, arid conditions**, ultimately resulting in the desiccation of the body.
- Similarly, mummified cadavers have also been found preserved in dry, cold conditions.

☞ The resulting corpse will often be fairly well preserved compared to cadavers that have undergone the 'typical' decomposition process, appearing brown in colour with **shrivelled, leather-like skin,** retaining certain aspects of the appearance and potentially improving the likelihood of establishing cause of death.

4. Scalding sign is present in :

a. Preterm birth b. Still birth
c. Abortion d. IUFD

Ans:d

☞ **Scalding sign** an indicator of **fetal death.** When fetal death has occurred loss of alignment and overriding of the bones of cranial vault occur due to shrinkage of cerebrum, abdominal sonar examination may reveal an overriding of the fetal cranial bones. Most estimates place the precise time of fetal death at about **4–7 days** before overlapping and separation of the fetal skull bones appear.

5. Tear of hymen most commony occurs at :

a. 6 0'clock b. 12 o'clock
c. 9 0'clock d. 4 o'clock

Ans:a

☞Tearing of hymen usually occurs posterio-laterally or in the middle (5 to 7 O'clock position)

Reference :Gautam Biswas 3rd edition page no. 376

6. In strangulation which of the following freature occurs:

a. dribbling of saliva
b. injury to neck muscles
c. fracture of cervical vertebra
d. lengthening of neck

Ans:b

Ligature Mark ('Furrow') in attempted Hanging and strangulation

S.No.	Features	Hanging	Strangulation
1	Direction	Oblique	Transverse
2.	Continuity	Non-continuous	Continous
3.	Level in the neck	Above thyroid	At or below thyroid
4.	Base	Pale, hard, parchment - like	Soft and reddish

7. A patient present with lacrimation, miosis, loose stool and increased salivation following which poisoning:

a. Morphine b. Dhatura
c. Salicylate d. OP poisoning

Ans: d

Muscarininc Features	Nicotinic Features	CNS Features
D iarrhoea	Muscle weakness	Fatigue
U rination	Muscle fasiculations	Confusion
M iosis	Muscle paralysis	Unconsciousness
B ronchorrhea	Muscle paralysis	Unconsciousness
E mesis	Hypertension	Ataxia
L acrimation	Tachycardia	Resp. depression
S alivation		
S weating		

8. All of the following are side effectsof OP poisoning except:

a. lacrimation b. diarrhea
c. constipation d. miosis

Ans:c

☞ Refer question 7.

Ortho

1. A young boy following RTA complain of pain out of proportion in right leg, pain on passive stretch, numbness and absent distal pulses. Most likely diagnosis is:

a. Fracture right tibia
b. Laceration of calf musdes
c. Compartment syndrome of right leg
d. injury to common peroneal nerve

Ans: c

Compartment syndrome:

Devastating condition where an osseofascial compartment pressure rises to a level that decreases perfusionmay lead to irreversible muscle and nerve damage.

Presentation

pain out of proportion to clinical situation is usually first

Symptom

- Pain on passive stretch.
- Fasciotomy is indicated when the differenence between the diastolic and compartment pressure is less than 30.

2. Most crucial for bone healing is :

a. Hematoma organization
b. Immobilization
c. Traction
d. Pain manaqement.

Ans: b

☞ Immobilation leads to hematoma organization as hematoma leads to bone healing. Both are important for bone healing. But in question both options are

available so better to go with immobilation as it leads to hematoma organization.

3. Most common type of shoulder dislocation is :

a. Anterior b. Posterior
c. Inferior d. None

Ans: a

☞ Anterior dislocation if the most common type of dislocation. It accounts for **more than 95%** of cases. In young people, the cause is typically sports-related. In older people, it usually is caused by a fall on an outstretched arm.

4. X-ray finding in ewing sarcoma is

a. Onion peel appearance
b. sun ray apperance
c. codmantraingle
d. soap bubble apperance

Ans: a

Ewing sarcoma

- It is common in children below 15 years boys . It commonly occurs in the diaphysis of long bones, pelvis, scapula and ribs.

Characteristics:

- Anaplastic small blue cell malignant tumor.
- Extremely aggressive with early metastases, but responsive to chemotherapy.
- 'Onion skin' appearance in long bones ("going out for **Ewing** and onion **rings**).

Osteosarcoma:

- Codman's triangle or sunbrust pattern (from elevation of periosteum) on x-ray. Has poor prognosis.

5. Most common degenerativebone disorder is :

a. OA b. RA
c. Gout d. SLE

Ans: a

Osteoarthritis:

Mechanical- wear and tear of the joint leads to destruction of articular cartilage cartilage, subchondral cysts, sclerosis, osteophytes (bone spur), eburnation (polished, ivory-like appearance of bone).

Predisposing factor: Age, Obesity, joint deformity.

Classic presentation: Pain in weight bearing joints after use.(Eg at the end of the day), improving with rest. In knees cartilage loss begins on the medial aspect (bow legged). Non inflammatory. No systemic symptoms.

6. What is the initial step of management of open wound :

a. Antibiotics
b. IV fluids
c. removal of dirt from the open wound
d. surgery

Ans:c

Opthalmology

1. Lignocaine dropsfor topical anesthesia in eye is :

a. 0.5% b. 1%
c. 2% d. 4%

Ans: d

☞ Lignocaine 2% gel and lignocaine 4 % drops is used as topical anesthesia in eye.

2. Amouris cat reflex is seen most commonly in:

a. Coat's disease b. Retinoblastoma.
c. congenital cataract d. Iridocyclitis

Ans: b

Leukocoria (Amaurotic Cats Eye Reflex)

- **Retinoblastoma(most common)**
- Congenital cataract
- Inflammatory deposits in the eye
- Coloboma of the choroid
- Retrolental fibroplasias
- Persistent hyperplastic primary vitreous
- Toxocaraendopthalmitis
- Exudative retinopathy of coats
- Tuberculoma of choroid
- Retinal detachment

3. Congenital unilateral cataract should be operated by:

a. Within few weeks of birth
b. 1 year
c. Six months
d. 2 years

Ans: a

☞ Unilateral cataract should undergo surgery as soon as possible to prevent **amblyopia and sensorynystagmus.**

4. Painless progressive dimunition of vision occurs in following condition:

a. Acute congestive glaucoma
b. Acute iridocyclitis
c. cataract
d. retinal detachment

Ans: c

☞ The chief causes of painless progressive loss of vision are:

1. Senile Cataract
2. Primary Open Angle Glaucoma
3. Age Related Macular Degeneration
4. Diabetic Retinopathy
5. Hypertensive Retinopathy

6. Progressive Myopia
7. Pars planitis
8. Retinitis pigmentosa
9. Toxic amblyopia
10. Progressive pterygium

5. Senile ptosis is due to which cause:

a. aponeurotic b. myogenic
c. mechanical d. neurogenic

Ans:a

- **Aponeurotic Ptosis** is the most common type of acquired ptosis, it's also called senile or involutional ptosis because it occurs most often in the elderly as an involutional disorder.
- Most patients with acquired ptosis develop the condition secondary to involutional changes in the levatoraponeurosis. Gradual stretching or dehiscence of this structure causes slowly progressive ptosis.

ENT

1. Moon face is seen in:

a. Lee Fort I b. Lee Fort II
c. Lee Fort III d. Orbital fracture

Ans:b

Moon face is seen in:

1. Cushing syndrome
2. Kwashiorker
3. Lee Fort II fracture

2. Most common emergency condition in ENT is :

a. Epistaxis
b. FB in nasal cavity in adult
c. Nasal polyp
d. B/L peritonsillar abscess

Ans: a

Sudden Sensorineural Hearing Loss

3. Low frequency ,fluctuating SNHL is seen in :

a. Meniere's disease b. Otosclerosis
c. Acoustic neuroma d. Globus tumour

Ans: a

- Ménière's is characterized by **recurrent episodes of vertigo, hearing loss and tinnitus**; episodes may be accompanied by headache and a feeling of fullness in the ears.
- The cause of Ménière's disease is unclear but likely involves both genetic and environmental factors. A number of theories exist including constrictions in blood vessels, viral infections, autoimmune reactions.
- There is no definitive treatment for the disease, but medications(dieuritics) , diet(reduce salt), physical therapy and counseling, and some surgical approaches(decompress the endolymphatic sac) can be used to manage it

4. Which of the following is true about Quinsy

a. present between tonsillar tissue and capsule
b. caused by anerobic bacteria
c. it most commonly affects children and rarely adults
d. Hot tonsillectomy is prefered

Ans:d

- Peritonsillar abscess (PTA) is one of the most common complications of acute tonsillitis and cause of emergency laryngological counselling. It is also the most common deep neck infection. Treatment is always connected with an abscess incision, drainage of purulent content, re-hydration under antibiotic coverage.

5. Most of the part of auricle is supplied by:

a. Greater auricular nerve
b. auriculotemporal nerve
c. greater occipital
d. lesser occipital

Ans: a

- The **auricle** or **auricula** is the visible part of the ear that resides outside the head. It is also called the **pinna.**

6. X ray to visualize the fracture of nose:

a. x ray nose AP b. x ray nose lateral
c. x ray skull AP b. x ray skull lateral

Ans:b

- **Nasal bone fractures** are the most common type of facial fractures, accounting for ~45% of facial fractures, and are often missed when significant facial swelling is present.

Radiographic features

It should be noted that cartilaginous injuries cannot be detected radiologically and that imaging of simple nasal bone fractures often add little to patient management. However, imaging can be useful in documentation, assessing extent and associated facial fractures and/or complications

Plain radiograph(X-ray)

- sensitivity ~80%
- best detected on **lateral view**
- Waters view is useful in assessing the nasal arch

CT

- sensitivity is 100%

7. MC congenital malformation of larynx is :

a. laryngomalacia b. laryngeal web
c. subglottic stenosis d. laryngeal cleft

Ans: a

Larynogmalacia:

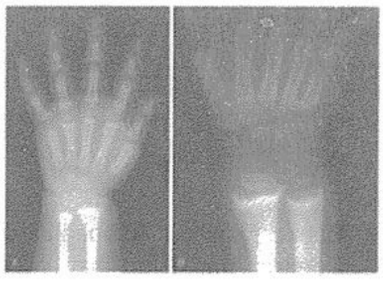
- Laryngomalacia is a **congenital softening of the tissues** of the larynx (voice box) above the vocal cords. This is the **most common** cause of noisy breathing in infancy. The laryngeal structure is malformed and floppy, causing the tissues to fall over the airway opening and partially block it.
- In **90 percent** of cases, laryngomalacia resolves without treatment by the time child is 18 to 20 months old.
- A surgery called **supraglottoplasty** is the treatment of choice

Pedia

1. A child has delayed growth according to age in comparision to others. On xray there is cupping, fraying and splaying of metaphysis.What is the likley diagnosis:

a. osteomalacia b. rickets
c. scurvy d. kwashiorkor

Ans:b



Wrist x-rays in a normal child (A) and a child with rickets (B). Child with rickets has metaphyseal fraying and cupping of the distal radius and ulna.

2. Earliest visible sign of puberty in male is:

a. Penis enlargement
b. Testicular enlargement
c. Pubic hair growth
d. Hoarsensess of voice

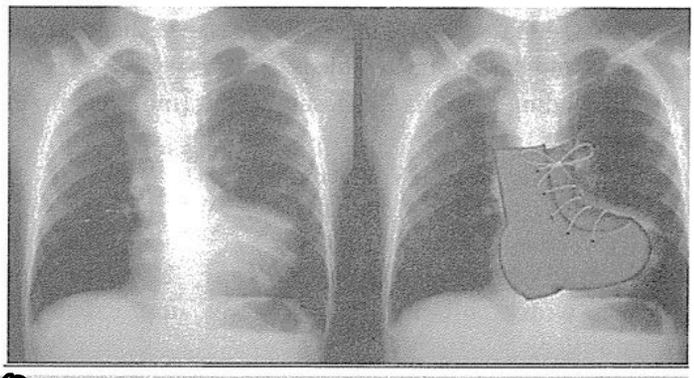
Ans: b

- The earliest sign of puberty in boys is **testicular enlargement** whereas in girls it is**breast development.**

3. Boot shaped heart is seen in:

a. VSD b. TOF
c. ASD d. PDA

Ans: b



4. A baby born at 36 weeks of gestation has birth weight 2.4kg.He has poor sucking response and and septic screen is negative,what will be management:

a. Expressed breast milk feeding
b. TPN
c. Orogastric tube feeding
d. Bottle feeding

Ans:a

5. Strawberry tongue is seen in:

a. Scarlet fever
b. Malaria
c. Measles
d. Wegenersgranulomatosis

Ans: a

- Strawberry tongue is the name given to a swollen, bumpy tongue. Most often, the enlarged tongue is very red, like a strawberry or raspberry. Causes are:
  1. Kawasaki Disease
  2. Scarlet fever
  3. Toxic shock syndrome
  4. Vitamin B-12 deficiency

6. Most common cause of pleural effusion in children is

a. Heart failure b. SLE
c. Pneumonia d. Asthma

Ans:c

- Pleural effusions in children most commonly are infectious (50% to 70% parapneumonic effusion); congestive heart failure is a less frequent cause (5% to 15%), and malignancy is a rare cause.

Reference:

http://pedsinreview.aappublications.org/content/23/12/417

7. Thickness of the skull bone is increased in the following disease:

a. Thalessemia b. Hemolytic anemia
c. ITP d. Osteomalacia

Ans: a

- Thalassemia is an autosomal recessive disorder of alpha and beta chain synthesis.
- Lab. finding of alpha thalassemia trait.(more common entity):
  1. decreased MCV, Hb, and Hct.
  2. Increased RBC count.
  3. MCV/RBC count ratio <13.

8. A child develops jaundice after 12 hours of birth,which of the following is not cause of jaundice:

a. Rh incompatibily
b. ABO incompatibility
c. Physiological jaunde
d. Neonatal hepatitis

Henoch-Schonlein purpura (HSP)

Ans: c

- Any jaundice that appears before 24 hours of birth is pathological. Causes of pathological jaundice are Rh incompatibility, ABO incompatibility and neonatal hepatitis jaundice in which appears within 24 hours of birth.
- Jaundice which appears after 24 hours of birth is physiological and is due to inability of immature liver to metabolise bilirubin.

9. A boy has palpable purpura, arthritis,abdominal pain,what is the diagnosis:

a. Thalesemia b. ITP
c. HSP d. Kawashaki disease

Ans: c

- It is the most common vasculitis among children in United States; leukocytoclasticvasculitis (vascular damage from nuclear debris of infiltrating neutrophils) + IgA deposition in small vessels of joints, skin GI tract and kidney.

***Reference**: USMLE Step 2 CK Pediatrics 184-185.*

10.A young girl presented with bleeding into the joints; aPTT is prolonged but PT is normal.What is the diagnosis.

a. Factor VIII deficiency
b. Von willebrand disease
c. ITP
d. Factor IX defiency

Ans:b

- The functions of Von willebrandfactor are:
  - it binds to factor VIII
  - platelet adhesion to the wound site
- Deficiency of Von willebrand factor leads to **prolongedaPTT** and **normal PT** similar as Haemophilia
- In the above question a young girl is mentioned which is unlikely for Haemophilia as female are usually carriers in case of Haemophilia
- So best answer will be Von Willebrand disease.

11.Single dose of vitamin A is given in :

a. measles b. night blindness
c. bitot spot d. chronic diahhrea

Ans: a

- Measles is a leading cause of childhood morbidity and mortality. Vitamin A deficiency is a recognised risk factor for severe measles. The World Health Organization (WHO) recommends administration of an oral dose of 200,000 IU (or 100,000 IU in infants) of vitamin A.

12.Disproportionate growth is seen in :

a. rickets
b. cretinism
c. achondroplasia
d. Growth hormone deficiency

Ans:c

- Achondroplasia is a failure of **longitudinal bone growth**(endochondral ossification) leading to short limbs. Membranous ossification is not affected thus large head. **>85%** of mutation occur sporadically and are associated with advanced paternal age. These people have normal life span and fertility.

Gynae/Obs:

1. Anencephaly at 12 weeks can be diagnosed by:

a. ∝-feto protein. b. β-HCG
c. Aminograph d. USG

Ans: a

- Anencephaly is a cephalic disorder that results from a neural tube defect that occurs when the rostral (head) end of the neural tube fails to close, usually between the 23rd and 26th day following conception. is the absence of a major portion of the brain, skull,and scalp that occurs during embryonic development.

2. Weak support of uterus is :

a. Perineal muscle b. Cardinal muscle
c. Broad ligament d. Round ligament

Ans: c

Supports of Uterus:

A. Primary Supports;

1. Muscular or active supports:
   - Pelvic diaphgram
   - Perineal body
   - Urogenital diaphgram
2. Ligamentous (Fibromuscular or mechanical) supports:

- Transverse cervical ligament of Mackenrodt or Cardinal Ligament
- Uterosacral ligament
- Round ligament
- Pubocervical Ligament
- Uterine axis

B. Secondary supports formed by peritoneal ligaments:

1. Broad ligament
2. Uterovesical fold of peritoneum
3. Rectovaginal fold of peritoneum

3. Which contraceptive has dual advantage:

a. OCP
b. Progestin only pill
c. Cupper T
d. Barrier methods and abstinence

Ans: d

☞ Barrier methods have dual advantage as:

1. they prevent conception
2. and also prevent from various STDs.

4. 3 monthly given Depoprovera contains:

a. 150 mg medroxyprogesterone
b. 100 mg levonorgestral
c. 100 mg medroxyprogesterone
d. 100 mg levoneorgestral

Ans: a

☞ Depo Provera is a contraceptive injection containing progesterone ie. medroxyprogesterone. It is commonly referred to as "the injection" or "DP".

☞ It prevents pregnancy by stopping the ovaries releasing an egg each month. There are also changes to the lining of the womb (endometrium).

☞ Typically, Depo Provera is 97% effective.

☞ To provide contraceptive cover in the first cycle of use, an injection of 150 mg i.m. should be given during the first five days of a normal menstrual cycle.

5. WHO recommends at least ..... antenatal visit :

a. 2 b. 3
c. 4 d. 6

Ans: c

☞ WHO recommends at least 4 ANC visits at 4,6,8 and 9th month of pregnancy.

6. Most common cause of breech presentation is :

a. Hydrocephalus b. Prematurrly
c. Primiqravida d. Multiparity

Ans: b

7. Pre-eclampsia is defined by :

a. Bp 130/90 with proteinuria
b. Bp 130/90 without proteinuria
c. Bp 140/90 without proteinuria
d. Bp 140/90 with proteinuria

Ans:d

Preeclampsia: It is a disorder of unknown etiology characterised by rise in blood pressure more than 140/90 mmHg with proteinuria after 20 weeks of pregnancy in a previously normotensive and non-proteinuric woman.

Preeclampsia=Hypertension+Proteinuria+ after 20 weeks of pregnancy+ previously normotensive and non proteinuricwoaman.

8. Eclampsia is defined as:

a. seizure with overlying preeclampsia
b. Pre eclampsia without seizures
c. Gestational Hypertension
d. chronic HTN

Ans: a

☞ Eclampsia=Preeclampsia+ Seizures

9. If neonate is born to a mother without talking iron supplementation during pregnancy, the child is likely to have:

a. Microcytic hypochromic anemia
b. Physiological anemia
c. megaloblastic anemia
d. Hemolytic anemia

Ans: a

☞ Pregnancy is prone to develop iron deficiency anemia and thus female are supplemented with iron. If she is not supplemented with iron then the woman along with her child are prone to have anemia.

10. Pap smear showed HSLL. Biopsy would show :

a. Carcinoma in situ b. CINI
c. Vaginal cervicitis d. Carcinoma of cervix

Ans: a

☞ **In Bethesda System cytology is graded as:**

LSIL: CINI
HSIL: CINII,CINIII,Carcinoma in situ

11. Which hormone is not produced byplacenta :

a. Estrogen b. Progesterone
c. LH d. β-HCG

Ans: c

☞ LH and FSH are produced by anterior pituitary gland. All other hormone mentioned above are produced by placenta.

12. Most common cause of genital fistula in developing country is :

a. Malignancy b. Obstructedlabour
c. UV prolapse d. Instrumentation

Ans: b

13. Most common cause of PPH is:

a. Atony b. Retained placenta
c. Infection d. Trauma

Ans:a

4 causes of PPH are:

1. **T**one (Atonic)
2. **T**rauma (trauma to reproductive organs).
3. **T**issue: Retained placenta
4. Coagulopathy

14. 37 weeks pregnant lady has rupture of membrance, but not in labour,whatwil be mangement :

a. Wait for vaginal delivery
b. Emergency c/s
c. Monitor for the maternal infections
d. Multiple times PV examination

Ans:A

15. A women with Ring pessary should follow up every :

a. 1 month b. 3 months
c. 6 months d. 12 months

Ans:c

☞ Ring pessary normally needs changing every 6 months , unless you have been told otherwise.

16.Pueperal sepsis is most commonly due to :

a. early pregnancy
b. post dated pregnancy
c. contact by contaminated hands
d. none

Ans: c

17.Anamoly scan is done during:

a. 12 weeks b. 18-24 weeks
c. 32weeks d. 8 weeks

Ans:b

☞ Anomaly scan is done with USG and usually done in 18-22 weeks. Organs are well formed to be demonstrated in USG at this time.

18. Which of the following is a feature of PCOS:

a. Amenorrhea and obesity
b. metrorrhagia and hirsutism
c. menorrhagia
d. none

Ans: a

☞ **Polycystic ovarian syndrome**: Increased LH production leads to anovulation, hyperandrogenism, due to deranged steroid synthesis by theca cells. Enlarged bilateral cystic ovaries manifest clinically with **amenorrhea, infertility, obesity and hirsutism.** Associated with insulin resistance. There is increased risk of endometrial cancer secondary to increased in estrogen from the aromatization of testerone in fat cells.

Treatment: Weight reduction, low dose OCP or medroxyprogesterone (decrease LH and androgenesis), clomiphene (for woman who wants to get pregnant).

19. Most common risk factor for carcinoma of cervix :

a. HPV 16,18
b. HPV 6,11
c. Multiple sex partners
d. Multipartiy

Ans:a

☞ HPV 16,18 cause 70% of cervical cancers
☞ HPV 6,11 cause 90% of genital warts

20. Genital warts are caused by:

a. Herpes b. HPV
c. HIV d. Syphilis

Ans:b

☞ **Genital warts** are asexually transmitted infection caused by certain types of **human papillomavirus.**

☞ HPV types **6 and 11** are the typical cause of genital warts. It is spread through direct skin-to-skin contact, usually during oral, genital, or anal sex with an infected partner. Diagnosis is generally based on symptoms and can be confirmed by biopsy

☞ Treatment options include creams such as podophyllin, imiquimod, and trichloroacetic acidCryotherapy or surgery may also be an option.

Surgery

1. Massive blood transfusion causes which of the following complication :

a. Hypokalemia b. Hyperthermia
c. Hypernatremia d. Tetany

Ans: d

☞ Citrate in transfused blood binds calcium,thus lowering the ionized plasma calcium concentration and leads to tetany.

☞ Massive blood transfusion causes hypothermia and hyperkalemia usually.

2. Most common intracranial tumor is:

a. Glioma b. Meningioma
c. medulloblastoma d. Pituitary adenoma

Ans: a

☞ **CNS tumor:** Approximately 70% primary tumor occur above the tentorium cerebelli. In order of decreasing frequency:

1. Glioblastomamultiforme(GBM).
2. Meningioma
3. Ependymoma

☞ Atrocytoma(glioma) accounts for about **70%** of all neurological tumors. It usually involves the frontal lobe in adult and cerebellum in children.

next time

3. In a case diagnosed with breast carcinoma of size 6 cm,fixed to axillary lymph nodes but no distant metastasis ,the stagging is :

a. stageII b. stageIIIa
c. stageIII b d. stageIV .

Ans: b

☞ Staging chart is given in previous years question given in book. Please make a look.

4. Fluid of choice in burn patient is :

a. NS b. RL
c. Plasma expanders d. DNS

Ans: b

☞ Ringer lactate is the fluid of choice for burn patient.

5. Metabolic alkalosis is seen in :

a. Acute renal failure
b. severe exercise
c. duodenal obstruction
d. Addison disease

Ans: c

☞ Metabolic alkalosis is seen in conditions like repeated vomiting due to loss of acid from body in case of duodenal obstruction. Also in diarrhea.

6. Most common congenital GI malformation is :

a. Meckel's diverticulum
b. Duodenal atresia
c. Anorectal malformation
d. Zenker's diverticulum

Ans: a

☞ Mecekl's diverticulum is a true diverticulum is a persistence of vitelline or yolk sac. The five **2**'s are:

1. **2** inches long
2. **2** feet from ileocecal valve.
3. **2** % population.
4. Commonly present in first **2** years of life.

7. A male patient following RTAhasresponse to pain, incomprehensible words &withdrawl response to pain.Calculatehis GCS score :

a. 8 b. 7
c. 9 d. 6

Ans: a

Glasgow coma scale

Response	Scale	Score
Eye opening response	Eyes open spontaneously	4 points
	Eyes open to verbal command, speech, or shout	3 points
	Eyes open to pain (not applied to face)	2 points
	No eye opening	1 points
Verbal Response	Oriented	5 points
	Confused conversation, but able to answer questions	4 points
	Inappropriate responses, words discemible	3 points
	No verbal response	1 point
Motor response	Obeys commands for movement	6 points
	Purposeful movement to painful stimulus	5 points
	Withdraws from pain	4 points
	Abnormal (spastic) flexion, decorticate posture	3 points
	Extensor (rigid) response, decerebrate posture	2 points
	No motor response	1 point
Minor Brain inury = 13 - 15 points; Moderate Brain injury = 9 - 12 points; Severe Brain injury = 3- 8 points		

8. Which is not a risk factor for breast cancer :

a. Family hx
b. Nulliparty
c. Long standing cyst in USG
d. BRCA 1

Ans: C

9. During surgery for strangulated hernia which part of hernia sac is opened first :

a. neck b. fundus
c. body d. infundibulum

Ans:b

☞ Inguinal herniotomy for strangulation

1. An incision is is made over the most prominent part of the swelling.
2. The external aponeurosis is is exposed and the sac with its covering.
3. sac is opened at the level of **fundus.**

Reference: *Bailey and Love 26th edition.*

10. Staghorn calculi is made of:

a. calcium b. phosphate
c. oxalate d. uric acid

Ans:b

Types of renal stone:

1. **Calcium stones**
   a. **Calcium oxalate stone (>50%)** is the most common type in adult. Incidence increases with pure vegan diet, Vitamin C deficiency and Chrohn's disease.
   b. **Calcium phosphate stones:** Associated with dairy products and distal renal tubular acidosis.
2. **Magnesium ammonium phosphate:** Staghorn calculus or struvite stone.(<15% of the cases). Associated with urease producer (Eg. Proteus). Urine is alkaline and smells with ammonia.
3. **Uric acid**(8 %), and cysteine (3%) of the cases.

11. Urethral rupture presents with triad except :

a. Hematuria
b. Pelvic haematoma
c. Excessive micturation
d. lack of micturation

Ans: c

☞ Classic triad includes(Campbel'surolgy 2002):

- Blood at meatus
- Inability to void
- Palpable full bladder

12. Causes of DVT are all except:

a. DM
b. Antitrombin deficiency
c. Paraoxysmal nocturnal haemoglobinuria(PNH)
d. OCP

Ans:a

☞ Antithrombin deficiency results in hypercoagulable state which may lead to venous thrombosis.

☞ PNH is characterized by hemolytic anemia, blood clots(thrombosis)and impaired bone marrow function.

☞ People with Diabetes may have an increased risk of DVT. But here the best answer will be Diabetes.

Deep Vein Thrombosis

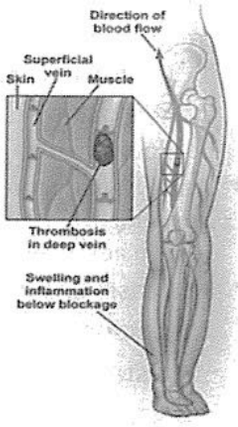
Etiology :

Remember THROMBOSIS

T...Trauma
H...Hormones-OCP'S
R...Road traffic accidents
O..Operations- cholecystectomy
M..Malignancy
B..Blood disorders- polycythemia
O..Obesity, Old age, Orthopedic surgery
S...Serious illness
I...Immobilization
S...Splenectomy

Clinical picture :

Leg swelling
Leg pain increases with walking or standing
Visible surface leg veins
Warmth and redness of the affected leg skin
Leg fatigue



Medicine

1. Painless Splenomegaly is seen in :

a. Malaria b. typhoid
c. Leprosy d. Scrub typhus

Ans: c

2. Antidote for organophosphorus poisoning is :

a. Atropine b. Pralidoxime
c. Oxygen d. Pilocarpiune.

Ans: a

Toxin	Antidote
Acetaminophen	N-acetylcysteine (replenishes glutathione)
Opiods	Naloxone/Naltrexone
Benzodiazepines	Flumazenil
Heparin	Protamine
Organophosphorus	Atropine

3. SPO_2 measures:

a. Oxygen saturation
b. Oxygen concentration in arterial blood
c. Oxygen concentration in venous blood
d. FiO2

Ans: a

☞ A pulse oximeter uses two frequencies of light (red and infrared) to determine the percentage (%) of hemoglobin in the blood that is **saturated with oxygen**. The percentage is called blood oxygen saturation,or SpO2. A pulse oximeter also measures and displays the pulse rate at the same time it measures the SpO2 level.

4. Earliest ECG change in hyperkalemia is:

a. Depressed ST segment
b. tall Twave
c. Widened QRS complex
d. Irregular wave

Ans: b

- Early ECG changes of hyperkalemia, typically seen at a serum potassium level of 5.5-6.5 mEq/L, include the following:
  - Tall, peaked T waves with a narrow base, best seen in precordial leads
  - Shortened QT interval
  - ST-segment depression
- At a serum potassium level of 6.5-8.0 mEq/L, the ECG typically shows the following:
  - Peaked T waves
  - Prolonged PR interval
  - Decreased or disappearing P wave
  - Widening of the QRS
  - Amplified R wave
- At a serum potassium level higher than 8.0 mEq/L, the ECG shows the following:
  - Absence of P wave
  - Progressive QRS widening
  - Intraventricular/fascicular/bundle branch blocks

5. Most common metabolic disorder is

a. Hyperkalemia b. Hypokalemia
c. Hypernatremia d. Hyponatremia

Ans: d

- Hyponatremia is defined as serum sodium concentration **less than 135 mmol/L,** hyponatremia is the **most common** electrolyte abnormality in hospitalized patient.
- ***Reference***: CMDT 2017, page 885

6. Most common cause microcytic hypo chromic anemia is :

a. Thalessemia
b. Anemia of chronic disease
c. Lead poisoning
d. Hookworm.

Ans: d

- Question is a bit tricky. Everyone of us know iron deficency anemia is the most common cause of microcytic hypochromic anemia. In the question hookworm causes intestinal blood loss and lead to iron deficiency anemia and thus microcytic hypochromic anemia.

7. Drug of choice myasthenia gravis is:

a. Neostigmine b. atropine
c. immunoglobulins d. Pralidoxime

Ans: a

8. Aortic aneurysm in marfan syndrome is seen in :

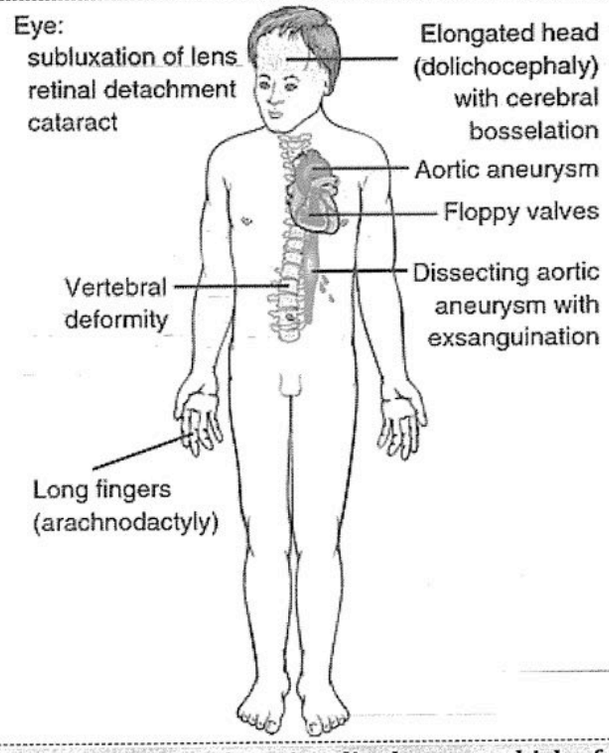
a. Ascending aorta b. Arch of aorta
c. Thoracic aorta d. Abdominal aorta

Ans:a

- Dilatation of the ascending aorta with our without regurgitation and dissection of the ascending aorta are the major CVS manifestations of Marfan syndrome.

Reference: medscape

Features of MarfanSyndrome:



9. A diabetic person is on insulin therapy ,which of the following complication may occur:

a. Hypokalemia b. Hyperkalemia
c. hypernatremia d. hyponatremia

Ans:a

- **Complications of insulin therapy:**
  - A. Metabolic
    - a. Hypoglycemia(most common)
    - b. Hypokalemia(causes potassium shift inside the cells)
  - B. Immunopatholgy of insulin therapy
    - a. insulin allergy

b. Immune insulin resistance
c. Lipodystrophy: Atrophy of subcutaneous fatty tissue.

10. Lung abscess is not seen in :
a. Pneumonia
b. Asthma
c. Bronchogenic carcinoma
d. Bronchiectasis

Ans: b

11. Aalcoholic person consumes alcohol frequently, HB:5.6gm%,serum iron is 190mcg/dl.The patient should be managed with :
a. Vit B12 b. iron
c. calcium d. phosphate

Ans:A

☞ Normal range of serum iron level is 60 to 170mcg/dl.In the above question Hb is low but the serum iron level is normal .So most probably low level of Hb is not due to iron deficiency anemia. So Vit. B12 supplementation will be the best choice.

12. Massive splenomegaly seen in all of the following conditions except:
a. CML b. Chronic kalazar
c. ITP d. Myelofibosis

Ans: c

☞ Memory tip for massive splenomegaly is:
CML G
CML
Myleofibrosis
Leshminasis
Gaucher's disease

13. Ronchi are also called as:
a. Crepitations b. Wheeze
c. Crackles d. Stridor

Ans:b

Name	Continuous/discontinuous	Frequency/Pitch	Inspiratory/expiratory	Quality	Associated conditions
Wheeze or rhonchi	continuous	high (wheeze) or lower (rhonchi)	expiratory or inspiratory	whistling/sibilant, musical	Caused by narrowing of airways, such as in asthma, chronic obstructive pulmonary disease, foreign body.
Stridor	continuous	high	either, mostly inspiratory	whistling/sibilant, musical	epiglottitis, foreign body, laryngeal oedema, croup
Inspiratory gasp	continuous	high	inspiratory	whoop	pertussis (whooping cough)
Crackles (aka crepitations or rales)	discontinuous	high (fine) or low (coarse), nonmusical	inspiratory	cracking/clicking/rattling	pneumonia, pulmonar edema, tuberculosis, bronchitis
Pleural friction rub	continuous	low	inspiratory and expiratory	nonmusical, many repeated rhythmic sounds	inflammation of lung linings, lung tumors

14. In thalassemia which of the following does not occurs:
a. RBC increased
b. Red cell distribution width normal
c. MCV decreased
d. RBC decreased

Ans: d

Lab findings in thalassemia:
- Decreased MCV, Hb and Hct.
- increased RBC count
- MCV/RBC count ratio <13.
- target cell inconsistently present
- Teardrop RBC inconsistently present
- Normal RDW, ferumferritin .

15. **Which of the following is VIT K dependentclotting factor:**
a. prothrombin b. factor XIII
c. factor VIII d. factor VI

Ans: A

☞ Factor 2,7 9 and 10 are the vitamin K dependent clotting factors.

16. **Which of the following is abnormal urinalysis:**
a. WBC 1-2/hpf
b. epithelial cells 2-3 /hpf
c. RBC :2-4/hpf
d. 3+ proteiniria

Ans:d

17. **Which one does not occur in liver cirrhosis:**
a. esophageal varices b. ascites
c. polycythemia d. splenomegaly

Ans: c

☞ Liver cirrhosis leads to portal hypertension thus leading to esophageal varices at the portocaval anastomosis, ascites and splenomegaly.

Anesthesia

1. **Atropine is given with ketamine to reduce which of the side effect of ketamine:**
a. salivation
b. pyschosis
c. respiratory paralysis
d. emergence reactions

Ans:a

Atropine

It is a tertiary amine that enters the CNS.

Pharmacologic effects

Atropine effects in order of increasing dose:

- decreased secretions(salivery, bronchiolar, sweat)
- mydriasis and cycloplegia
- hyperthermia
- tachycardia
- sedation
- urinary retention and constipation
- behavioural and hallucination

☞ Ketamine can induce hypersalivation thus anticholinergics like atropine or glycopyrrolate are often administered to counteract this effect.

☞ Midazolam can be given along with ketamine to blunt the occurrence of emergence reactions.

2. **Side effects of succinylcholine are all except:**
a. Hyperkalemia b. Arrhythmia
c. Hypernatremia d. Increased ICP

Ans:c

SIDE EFFECTS AND COMPLICATIONS OF SUCCINYLCHOLINE

- Muscle fasciculation/postoperative myalgia
- Increased intracranial pressure
- Increased intragastric pressure
- Increased intraocular pressure
- Prolonged blockade in patients with pseudocholinesterase deficiency
- Bradycardia and junctional arrhythmias
- Anaphylaxis and anaphylactoid reactions
- Rhabdomyolysis leading to myoglobinuria
- Hyperkalemia – may be life-threatening
- Masseter muscle rigidity/malignant hyperthermia (MH)

3. **Opoid causesdeath by:**
a. cardiogenic shock b. respiratory paralysis
c. arrhythmia d. stroke

Ans: b

☞ Opiod toxicity causes **severe respiratory depression (reverse with naloxone),** nausea and vomiting.

☞ Withdrawal causes lacrimation, yawning, sweating and restlessness rapidly followed by centrally originating pain, muscle cramping and diarrohea; not life threatening.

4. **In reversal atropine is given along with Neostigmine to counteract the following effects of neostigmine except:**
a. Increased salivation
b. lacrimation
c. Tachycardia
d. Bradycardia

Ans:c

Side effects of AChE inhibitors are:

Diarrhoea
Urination
Miosis
Bradycardia
Bronchoconstriction
Lacrimation
Salivation
Sweating
CNS stimulation

If you know the side effects of Neostigmine then you can find the answer.

Dermatology

1. Which of the following is drug of choice for tineacapitis in children:

a. Fluconazole b. Terbenafine
c. Ketoconazole d. Griseofulvin

Ans: d

- **Griseofulvin:** It is a fungistatic agent and has less side effects compared to other antifungal.
- **Dose:** Adult, oral; 0.5-1 gram daily in divided doses or as a single dose after meal, for children 10 mg/kg body weight.
- **Reference:**NiD, Dr. NRS Pandit; page 289.

2. Toxic shock syndrome is produced by :

a. E. coli b. Streptococeus
c. Staph aureus. d. Pneumococcus

Ans: c

- Toxic shock syndrome (TSS) is a condition caused by toxins of either the **Streptococcus pyogenes or Staphylococcus aureus**type. The underlying mechanism involves the production of superantigens during an invasive streptococcus infection or a localized staphylococcus infection.
- In question both Staph and Strep is given go with Staph.
- Diagnosis is typically based on symptoms.

Psychiatry

1. Schizophrenia is a disorder of :

a. Mood b. Thinking
c. attitude d. perception

Ans: b

Biochemistry

1. How many termination codons are present

a. 3 b. 12
c. 8 d. 9

Ans: a

- There are three mRNA stop codons as:
  UGA(@**UG**o **A**way)
  UAA(@**UA**re **A**way)
  UAG(@**U** **A**re **G**one)
  mRNA start codons are:
  AUG(or rarely GUG)

Structured Type Questions:

A. A10 years boy presents with abdominal pain,oliguria,facial puffiness and swelling of lower extremities.He also gives history of passing cola coloured urine.

1. What is the probable diagnosis:

a. HUS b. Nephrotic syndrome
c. PSGN d. MCD

Ans:c

2. What history will you try to extract from the patient party:

a. recent skin lesions b. fever
c. arthritis d. chorea

Ans:a

3. The most important investigation is:

a. USG b. Urine albumin
c. C3 level d. Urine RME

Ans:c

4. The boy suddenly fainted with vacant stare and stiffening of limbs.The most probable cause is:

a. epilepsy
b. thromboembolic phenomenon
c. HTN
d. Hypoglycemia

Ans:c

5. What is the most likely prognosis of this condition:

a. usuall good
b. fatal
c, chronic renal failure
d. grievious

Ans:a

The same question was asked in NMCLE Mangsir 2074. Please refer to the section.

B. A 24 years newly married female presents in OPD with PV spotting and lower abdominal pain.Her LMP was 5 weeks back .On examination there is no tenderness or rigidity or mass per abdomen.On deep palpation there is tenderness in RIF. Her vitals are stable.On PV examination OS is closed, mild PV bleedingpresent .

1. What is your first diagnosis:

a. UTI b. PID
c, Ectopic pregnancy d, Abortion

Ans:c

2. Which investigation will you send first:

a. USG B. Beta HCG
c. Laproscopy d. Xray

Ans:b

- Confusion is either Beta hcg or USG but at first one should make assure the lady is pregnant or not. So Beta HCG is the best choice.

3. Investigation for definitive diagnosis is :

a. Hysteroscopy b. Cystoscopy
c. Laproscopy d. USG

Ans:c

☞ Next best investigation for ectopic pregnancy is USG but for the definitive diagnosis one should do laproscopy.

4. Procedure which is diagnostic as well as therapeutic:

a. hysteroscopy b. USG
c. Laproscopy d. Laparotomy

Ans:d

☞ Laprotomy shows the ectopic as intervention can be done.

5. Treatment modalities is /are:

a. expectant
b. medical
c. surgical
d. medical and surgical

Ans:d

Indications for medical management:

- haemodynamically stable
- serum hcg level less than 3000IU/L
- tubal diameter should be less than 4 cm without cardiac activity.
- there should be no intraabdominal hemorrhage

C. A 30 years old women presents with dysphagia for both solid and liquid diet,weight loss,loss of appetite,regurgitation.On further questioning she told that she had dysphagia more for liquids than solid.

1. What is the most probable diagnosis:

a. Achalasia cardia
b. Oesophageal carcinoma
c. Gastric carcinoma
d. Barretoesophagus

Ans:a

☞ Look for the age and always look all the questions before making diagnosis. Later questions may give clue.

2. The most important investigation is:

a. Barium swallow
b. esophageal manometry
c. USG
d. Xray

Ans:b

3. On Barium swallow,what is seen:

a. Target sign
b. Bird Beak appearance
c. Double bubble sign
d. Coffee bean sign

Ans:b

Bird peak appearance in achalasia cardia

4. Treatment of this condition is:

a. Esophagectomy
b. Ramsted'spyloromyotomy
c. Nissen fundoplication
d. Heller's cardiomyotomy

Ans:d

5. The lining of Lower end of oesophagus is:

a. columnar b. Squamous
c. Pseudostratified d, Transitional

Ans:a

☞ Oesophagus is lined by nonkeratinizing stratified squamous epithelium .The epithelium changes from squamous cell epithelium to columnar cell epithelium at the gastroesophageal junction.This junction is termed as" Z line " or squamocolumnar junction.

Reference:*Medscape*

D. A 50 years old man from teraigave a history of fever of 102 Degree Fahrenheit with chills and rigor.The fever is benign tertian.

1. What is the causative agent:

a. P. vivax b. P. malariae
c. P. falciparum d, P. ovale

Ans:a

2. Treatment of this condition is:

a. Chloroquine b. Primaquine
c. quinine d. artemisininderivities

Ans:a

- Chloroquine is the drug of choice. 600 (4 tablets of 150 mg) mg is given as base. After 6 hours 300 mg is given and after 24 hours 150 mg is given after 24 hours and next 150 mg in next day.

3. Drug for radical therapy is :

a. artemisinin derivatives
b. chloroquine
c. Primaquine
d. None

Ans:c

- Primaquine is given to eradicate the dormant plasmodium. Dose is 0.15 mg/kg OD for 14 days.

4. MOA of Chloroquine:

a. Inhibits DHF reducatase
b. Inhibits Haeme polymerase
c. Inhibit protein synthesis
d. All

ans:b

- The exact mechanism of action of chloroquine is unknown but is believed to inhibit the **action of heme polymerase activity.**

5. Prophylaxis for malaria before going in endemicareas is given:

a. every weekly for 1 week before going and for 4 weeks after returning
b. every weekly for 4 weeks before going and for 4 weeks after returning
c. 1 day before going and for 4 days after returning
d. None

Ans: a

- When taking chloroqine prophylaxis it should be taken 1 week before the exposure and continued until 4 weeks after the exposure.
- Dose: 300 mg (base)=500 mg
- Dose regimen: once a week

E. A baby is delivered at 33 weeks of gestation suffered from shortness of breath.On X ray ground glass opacities seen :

1. What is the most probablediagnosis:

a. Meconium Aspiration syndrome
b. Transient tachypnea of newborn
c. Trachoesophageal fistula
d. HMD

Ans:d

- Hyaline membrane disease also called Respiratory Distress Syndrome is common in preterm babies less than 34 weeks of gestation.

2. What is the diagnostic investigation:

a. chest X ray b. USG
c. CT d. MRI

Ans:a

- In early chest x-ray fine **granular appearance** of the parenchyma and **air bronchograms** are seen.
- Lately **ground glass** opacity is seen.

3. What is the cause of theabove condition:

a. surfactant deficiency
b. infection
c. Meconium stained liquour
d. postmaturity

Ans:a

- Type 2 pnemuocytes secrete surfactant which prevent alveolar collapse. In preterm babies surfactant is less and thus are prone to HMD.

4. Treatment of this condition is:

a. Intubation
b. Bag and mask ventilation
c. surfactant therapy
d. Wait and watch

Ans:c

- Surfactant therapy is the definitive therapy. Multidose endotracheal instillation 4ml/kg is initiated as soon as possible in the 1st 24 hour of life.

5. For the prevention of this condition steroid is given:

a. to mother before delivery
b. to mother after delivery
c. to child after delivery
d. to mother and child after delivery

Ans:a

- Administration of Betamethasone to mother 48 hours before the delivery of the fetus between 24 and 34 weeks of gestation.

F. A 60 years old male smoker presented with SOB,non productive cough and haemoptysis for 4 weeks.

1. Which investigation do you want to do first to reach diagnosis:

a. Bronchoscopy b. X ray
c. CT d. MRI

Ans:b

- Usually whatever the case x-ray is done to localise the lesion. For specific purpose bronchoscopy, CT and MRI are done.

2. There was no history of fever and X ray was done which showed coin shaped appearance is in right lower zone.What is the most probable diagnosis:

a. bronchogenic carcinoma
b. COPD
c. Bronchiectasis
d. TB

Ans:a

3. What will be the diagnostic investigation for the above case :

a. CECT b. MRI
c. Endoscopy d. PET scan

Ans:a

☞ After Xray is done and lesion is localised and if wants to be more sure about the lesion CECT is done in case of suspected bronchogenic carcinoma.

4. Bronchogenic carcinoma is commonly associated with:

a. Clubbing b. Anemia
c. Lymphadenopathy d. Polycythemia

Ans:a

Causes of clubbing are:

Respiratory

Lung abscess
Bronchogenic carcinoma
Bronchiectasis
Empyema
Fibrosis

Cardiac

Congenital heart disease
AV malformation
Infective incarditis

GI

Liver cirrhosis
Inflammatory bowel disease
Celiac disease

5. What is the most common cause of bronchogenic carcinoma in Nepal:

a. smoking b. Air pollution
c. COPD d. asbestos

Ans:a

G. Patient presented with the fever,cough and complaint of swelling in the right groin.On examination there was tenderness in the thoraco-lumbar region.

1. Which investigation do you want to do first to reach diagnosis:

a. x ray b. USG
c. CT d. MRI

Ans: a

2. What is the most likely diagnosis:

a. psoas abscess due to TB spine
b. Bacterial abscess
c. Seminoma
d. Inguinal Lymphoadenopathy

Ans:a

3. What will be your diagnostic investigation for the above condition:

a. X ray b. culture
c. MRI d, CT

Ans: B

Culture always becomes answer of choice when diagnosis for infection is to be made.

4. What history do you want to ask in this case:

a. family history b. past medical history
c. personal history d. socioeconomic history

Ans:b

5. Treatment of the above case wiibe :

a. aspiration and Anti Tubercular drugs
b. ATT only
c. aspiration only
d. surgery

Ans:a

H. A 10 year male child presented with the history of sore throat, fever and migratory joint pain.

1. What is the most likely Diagnosis:

a. Acute rheumatic fever
b. Rheumatoid arthritis
c. Idiopathic arthritis
d. SLE

Ans:a

Johns criteria(Major):

1. Migratory polyarthritis
2. cardits
3. erythtematousmarginatum
4. subcutaneous nodules
5. syndenhams chorea

☞ If two or more of the major criteria are present with evidence of streptoccal infection RF is diagnosed.

2. How is the above condition best diagnosed:

a. clinically
b. clinical correlated with investigations

c. echo
d. ECG

Ans:b

☞ Clinical features(of Johns criteria) are correlated with ASO titre, ecg and echo(investigation).

3. What is the cause of shortness of breath in this case:

a. cardiogenic b. pulmonary
c. neurogenic d. Metabolic

Ans:a

☞ Valves of the heart mainly mitral followed by aortic valve are involved.

4. Which of the following should be given to prevent reccurence:

a. NSAIDS b. Steroids
c. immunoglobulins d. Penicillin prophylaxis

Ans:d

Antibiotic administration and doses

Antibiotic	Administration	Dose
Benzathine penicillin	Single IM injection every 21 days	1.2 MU > 27 kg 600 000 U < 27 kg
Penicillin V	BD PO daily	250 mg bd
Erythromycin ethylsuccinate	BD po daily	Use same dose as above.

Upto when

Category of Patient	Duration of Prophylaxis
RF without carditis	For 5 years after the last attack or 21 years of age (whichever is longer)
RF with carditis but no residual valvular disease	For 10 years after the last attack, or 21 years of age (whichever is longer)
RF with persistent valvular disease, evident clinically or on echocardiography	For 10 years after the last attack, or 40 years of age (whichever is longer). Sometimes lifelong prophylaxis.

5. What is the cause of above case:

a. unknown b. autoimmune
c. multifactorial d. genetic

Ans:b

I. A child was suspected to have Wilm's tumor. Choose the best answer for the following question in reference to Wilm's tumor.

1. Which investigation do you want ot carry out first to reach diagnosis:

a. USG b. X RAY
c. CT d. MRI

Ans:a

☞ **USG is the most important investigation since it can differentiate solid from cystic renal mass.** CTscan and MRI provide detailed view of the extent of tumor . A chest xray is necessary to examine for pulmonary metastasis.

2. Which one of the following is not a Paediatric tumour:

a. Neuroblastoma
b. Wilmsnephroma
c. Rhabdomyosarcoma
d. Clear cell carcinoma

Ans:d

3. Which one of the following is not associatd withWilmstumour :

a, Aniridia b. Mental retardation
c. Cryptorchidism d. Juvenile Diabetes

Ans:d

☞ Genetic syndromes particularyaniridia, hemihypertrophy, Beckwith Wiedmann syndrome(macroglossia, gigantism, umbilical hernia, hemihypertrophy), WAGR(Wilmstumor, aniridia, genitourinary malformations and mental retardation) and trisomy 18 may be associated.

4. Which one is true regarding epidemiology of Wilms tumour:

a. Wilms tumor is the second most common tumor of kidney
b. 5-7% of paediatric tumours are wilmstumour
c. 80 percent of the Wilms tumor present above 5 years.
d. Boys are more frequently affected than girls.

Ans:b

☞ Wilms tumor is the most common tumor of kidney which accounts for 5-7 % of paediatric tumours. 80 percent of the Wilmstumor present below 5 years. Boys and gilrs are equally affected.

5. Which of the following is false regarding Stagging of Wilms tumour:

a. Stage I: tumour is limited to kidney and is completely resected
b. Stage II: tumour extends beyond kidney and is completely resected
c. Stage III: tumourinfiltrates renal fat;residual tumor after surgery.
d. Stage IV: B/L renal involvement by the tumour

Ans:d

☞ Prognostic factor are determined by staging. In the option given a,b and c are correct. But the 4th option is of stage 5. So is a false option.

Staging of Wilms tumour:

Stage I :

- The tumor is limited to the kidney, is encapsulated, and can be completely removed surgically.

Stage II:

- The tumor extends beyond the kidney but is completely removed.

Stage III:

- The tumor is not completely removed sugically, but disease is still limited to the abdomen.

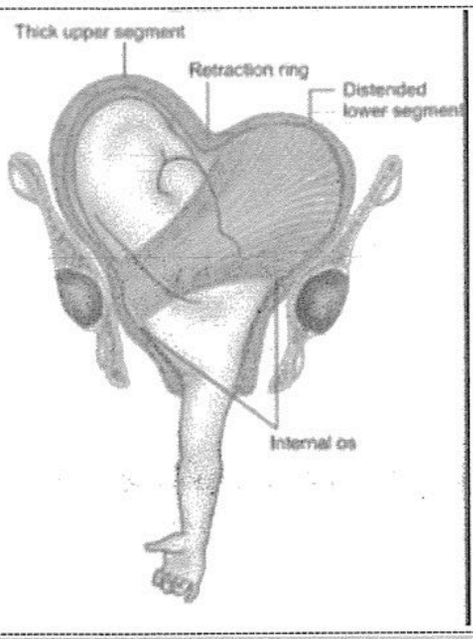
Stage IV:

- The disease has spread to the lung, liver, bone, brain or to lymph nodes outside the pelvic region.

Stage V:

- Both kidneys contain tumor at diagnosis.

Source: Ghai.



1. What is the Lie and Presentation:

a. longitudnal lie and shoulder
b. longitudnal lie and hand
c. transverse lie and hand
d. transverse lie and shoulder

Ans:b

Lie: The lie refers to the relationship of the long axis of fetus to the long axis of the centralised uterus or maternal spine.

Presentation: The part of the fetus which occupies the lower pole of the uterus (pelvic brim)

2. What is the most likely diagnosis:

a. Hand prolapse b. Obstructedlabour
c. shoulder dystocia d. Normal labor

Ans:b

☞ Obstructed labor is the one where inspite of good uterine contraction progressive decent of the presenting part is arrested due to mechanical obstruction.

Causes:

Fault in passage: CPD, soft tissue obstruction

Fault in passenger: Transverse lie, Brow presentation, congenital malformation of fetus.

3. What peculiarity is present in this case:

a. constriction ring b. large baby
c. cord prolapse d. MAS

Ans:a

☞ It is one form of incordinate uterine action where there is localised myometrial contraction forming a ring of circular muscle fibers around the uterus. It is usually situated in the junction of upper and lower segement around the constricted part of the fetus usually around the back in the cephalic presentation.

4. Regarding progression of labour which one is true:

a. baby goes in the spontaneous version
b.normal delivery occurs
c. Progression of labourdoest'n occur
d. None

Ans:c

5. What will be the complication of the above case:

a. Fetal death
b. Uterine rupture and genito-urinary fistula
c. sepsis
d. shock

Ans:d

☞ There is no mechanism of labor in transverse lie and an average baby fails to pass through an average sized pelvis. If the lie remains uncorrected and the labor is uncared complicatation mentioned in the options may arise. Although above all complications may occur , the best choice will be Uterine rupture and genito-urinary fistula.

Complications of prolonged obstructed labour

Maternal

- Infection- sepsis, periotnitis, wound infection
- Fistula
- Thrombo-embolism
- Ruptured Uterus
- PPH
- Broad Ligament Haematoma
- Shock
- Paralytic ileus
- Burst abdomen

NMCLE - 2075 MANGSIR

Prepared & Explained by:
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Memory Based Questions

1. **Digoxin increases myocardial contractility by this mechanism:**
   a. Ca^{2+}
   b. Opening Ca^{2+}
   c. Closure of Cl^-chanels
   d. Inhibiting Na^+k^+ ATPase in the membrane

   Digoxin inhibits Na^+/K^+ exchange by Na^+/K^+ ATPase
   ↓
   The concentration of intracellular Na^+increases and the concentration gradient across the membrane decreases
   ↓
   Increased Na^+ decreases the driving force for the Na^+/Ca^{2+} exchanger, so there is decreased extrusion of Ca^{2+} into the extracellular space
   ↓
   Increased intracellular Ca^{2+} leads to increased myocardial contraction

   Ref: Lippincott's Pharmacology 5th edition Pg 196

2. **Dignostic power of test is shown by**
   a. Predictive value b. Sensitivity
   c. Specificity d. Precision
   - *Sensitivity of a screening test is the ability of a test to detect true positives.*
   - *Specificity of a screening test is the ability of a test to detect true negatives.*
   - *Usefulness of a screening test is given by: Sensitivity*
   - *Diagnostic power of a screening test: Predictive value.*
     1. *Diagnostic power of a screening test to correctly identify a disease: Positive predictive value.*
     2. *Diagnostic power of a screening test to correctly exclude a disease: Negative predictive value*

   Ref: Review of Preventive and Social Medicine (Vivek Jain) 7th edition Pg 218-219

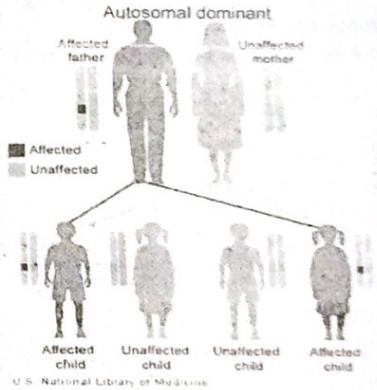
3. **The vaccine contraindicated in pregnancy is**
   a. Hep.B b. Influenza
   c. Rabies d. Rubella
   - *Vaccines Contraindications*
     - *Pregnancy: All live vaccines except yellow fever vaccines*
     - *Asymptomatic HIV: None, Symptomatic HIV: All live vaccines.*
     - *Immunosuppression/Steroid therapy: All live vaccines*
     - *Fever: Typhoid vaccines*
     - *Diarrhea/Acute Respiratory Tract Infections: None*
     - *Preterm/LBW (<2kg) baby: Hepatitis B.*
     - *Progressive neurological disease: Pertusis vaccine (not C/I in cerebral palsy or epilepsy controlled with medications)*
     - *Only absolute contraindication to a killed vaccine: Severe local or generalized reaction to a previous dose.*

   Ref: Review of Preventive and Social Medicine (Vivek Jain) 7th edition Pg 113-114

4. **The most common position of appendix is**
   a. Preileal b. Postileal
   c. Retrocecal d. Pelvic
   - *Retrocecal = 75%*
   - *Pelvic = 21%*
   - *Paracaecal = 2%*
   - *Sub caecal = 2%*
   - *Pre-ileal = 1%*
   - *Post-ileal = 0.5%*

   Ref: SRB's Manual of Surgery 5th edition Pg 937-938

5. **A condition with autosomal dominant inheritance affects one parent and**
   a. 25% of boys and 75% of girls
   b. 25% of girls and 75% of boys
   c. 50% of boys and 50% of girls
   d. None



   - *Autosomal dominant conditions:*
     - *NF type 1*
     - *MarfanSyndrome*
     - *Huntington disease*
     - *Achondroplasia*
     - *Familial hypercholesterolemia*

   Ref: wikipedia.org

1.d	Inhibiting Na+k+ ATPase...	2.a	Predictive value	3.d	Rubella
4.c	Retrocecal	5.c	50% of boys and 50% of girls	6.d	+60 D
7.a	Herpes Simplex Keratitis	8.b	mordant	9.d	Nitrates
10.c	Stage III a	11.b	30	12.c	Respiratory syncytial virus
13.c	Nitrous oxide	14.c	Ethical board formed by ...	15.c	Severe

6. The total power of human eye is

a. 6 D b. +12 D
c. 48 D d. +60 D

➲ *Total optical power of a relaxed human eye is approx 60 dioptres. The cornea accounts for approx three fourth of its refractive power (about 45 dioptres) and the crystalline lens contributes the remaining one-fourth (about 15 dioptres)*

Ref: Comprehensive Ophthalmology 5th edition (A.K. Khurana) Pg 89

7. Which condition is associated with decreased corneal sensation?

a. Herpes Simplex Keratitis
b. Bacterial corneal ulcer
c. Indocyclitis
d. Fungal keratitis

➲ *Herpes keratitis: HSVI (more common), HSV II*
➲ *Superficial infection ⇒ involves only the epithelium; heals without scarring.*
➲ *Deeper layers of cornea ⇒ may lead to scarring of the cornea, loss of vision & sometimes even blindness.*
➲ *Damages the nerve fibres supplying the cornea*
➲ *Results dendritic ulcer*

Ref: Comprehensive Ophthalmology 5th edition (A.K. Khurana) Pg 102-103

8. The role of iodine in Gram's stain is:

a. cofactor for crystal violet
b. mordant
c. Primary stain
d. counter-stain

➲ *A mordant binds a chemical dye and holds it down, such that the dye remains stuck on the organism.*
➲ *In Gram's stain, Crystal Violet = Primary stain*
Iodine = Mordant
Ethanol/Acetone = Decoloriser
Safranin = Counter Stain

Ref: wikipedia.org

9. The drug-drug interaction of sildenafil is with

a. Alprostadil b. Digoxin
c. Nifedipine d. Nitrates

➲ *Sildenafil has significant interactions with both alprostadil and nitrates.*
➲ *Sildenafil = Phosphodiesterase 5 inhibitor*

Uses of sildenafil

1. *Erectile dysfunction*
2. *Pulmonary arterial hypertension*

➲ *Use of sildenafil is contraindicated in patients currently taking nitrate preparations due to the risk of significant hypotension.*

Ref: UpToDate

10. A lady has a 6 cm sized breast mass with fixed ipsilateral axillary lymph nodes. The stage is:

a. Stage I b. Stage II
c. Stage III a d. Stage III b

Stage 0 = *Non-invasive cancer* = T_{is}, N_0, M_0
Stage IA = $T_1N_0M_0$
Stage IB = T_0 or $T_1N_1M_0$
Stage IIA = $T_2N_0M_0$
Stage IIB = $T_2N_1M_0$, $T_3N_0M_0$
Stage IIIA = T_0, T_1, T_2 or $T_3N_2M_0$; $T_3N_1M_0$
Stage IIIB = T_4, N_0, N_1 or N_2, M_0
Stage IIIC = any T, N_3, M_0
Stage IV (metastatic) = any T, any N, M_1

TNM staging of breast cancer is given in previous year's solutions.

Ref: SRB's manual of surgery 5th edition, Pg 540

11. A person of 89 kg has height of 172 cm. What is his BMI?

a. 28 b. 30
c. 33 d. 36

$$\text{Body Mass Index} = \frac{\text{Weight (in kg)}}{(\text{Height in metre})^2} = \frac{89}{(1.72)^2} = 30\ kg/m^2.$$

12. The most common organism associatedwith bronchiolitis is:

a. Adenovirus
b. Coronavirus
c. Respiratory syncytial virus
d. Para-influenza

Bronchiolitis = Lower respiratory tract infection in children < 2 years of age
Wheezing present, Crackles present

Etiology: Viral: RSV (MC), Influenza, Parainfluenza, Adenovirus, Rhino virus.
Bacterial: Mycoplasma Pneumoniae

Ref:Ghai Essential Pediatrics Eighth edition, Pg 381

13. A man sustained spleen rupture during RTA and needs laparotomy. Which agent is not to be used as he also has pneumothorax?

a. Halothane b. Isoflurane
c. Nitrous oxide d. Desflurane

➲ *Nitrous Oxide tends to diffuse into air containing cavities. If the walls surrounding the cavities are rigid, pressure rises instead of volume.*
➲ *Nitrous oxide can therefore be hazardous in venous or arterial air embolism, pneumothorax, acute intestinal obstruction with bowel distension, intracranial air, intra – ocular air bubbles.*

Ref: Morgan and Mikhail's Clinical Anaesthesiology 5th edition, Pg 166

14.The professional negligence of a doctor is punishable by

a. Civil court
b. Criminal court
c. Ethical board formed by Nepal Medical Council
d. Hospital Administration.

➲ *Professional negligence by a medical doctor is seen by ethical board formed by Nepal Medical Council.*

15.A 3 yr girl has weight of 8 kg and height of 90 cm. What is the grade of malnutrition?

a. Mild b. Moderate
c. Severe d. Very severe

Average weight of 3yr girl is 14.2 kg

Then, Her wt. for age comes out to be $= \frac{8}{14.2} \times 100$

$= 56.33\%$

IAP grading of malnutrition: Wt. for age

Normal	*≥ 80%*
Mild	*70-80%*
Moderate	*60-70%*
Severe	*50-60%*
Very Severe	*<50%*

Ref: IAP Textbook of Pediatrics Pg 155

Answer

1.d	Inhibiting Na+k+ ATPase...	**2.a**	Predictive value	**3.d**	Rubella
4.c	Retrocecal	**5.c**	50% of boys and 50% of girls	**6.d**	+60 D
7.a	Herpes Simplex Keratitis	**8.b**	mordant	**9.d**	Nitrates
10.c	Stage III a	**11.b**	30	**12.c**	Respiratory syncytial virus
13.c	Nitrous oxide	**14.c**	Ethical board formed by ...	**15.c**	Severe

16.Succinylcholine results in muscle relaxation due to

a. Persistent depolarization
b. Competitive antagonism
c. Muscle disintegration
d. Central action

Succinylcholine is a depolarizing neuromuscular blocker.
Onset of axn: 20-30 sec (Shortest acting muscle relaxant)
Duration of axn = 3-5 min
Dose = 1-2 mg/kg

➲ *Malignant hyperthermia: Succinylcholine is most commonly implicated.*
➲ *Can cause post-operative myalgia and fasciculations*

Ref: Pharmacology by Bhattacharya 2nd edition, Pg 236

17.A hypertensive man is on hydralazine. What side effect can he have?

a. Sweating b. Pedal edema
c. Blurting of vision d. Tachycarclia

Hydralazine: Direct vasodilator, dilates arterioles with little effect on vein

Adverse effects

➲ *Hypotension*
➲ *Tachycardia, Palpitations*
➲ *Nausea, sweating*
➲ *Headache*

Ref: Lippincott Pharma Review 5th edition, Pg 239

18.The most common site of cholangiocarcinoma is

a. Intrahepatic
b. Common bile duct
c. Hepatic duct bifurcation
d. Distal end of common bile duct

Intrahepatic tumors = least common
Extrahepatic Perihilar/Klatskin tumors = most common (Occur at the bifurcation of common hepatic duct)
Distal extrahepatic = Located from the upper border of pancreas to the ampulla
>90% are adenocarcinomas and the remainders are squamous cell cancer.

Ref: SRB's Manual of Surgery 5th edition Pg 661

19.Which of these is not a live vaccine?

a. OPV b. BCG
c. Measles d. Rabies

Live attenuated: *Bacterial: BCG, Oral typhoid, Plague*
Viral: *OPV, MR, Varicella, yellow fever, Influenza (LAIV), Cell cultured live JE (Used in Nepal)*
Killed or inactivated:
Bacterial: *Whole cell killed typhoid, DTPw, cholera*
Viral: *Salk polio vaccine (IPV), Rabies, Hep. A, killed influenza, killed JE, Hep. B*
Toxoids: *Tetanus & Diphtheria*
Subunit: Viral: *Hep. B, HPV*
Bacterial capsular polysaccharide: *H.influenza type b (Hib), Meningococcal, Pneumococcal.*

Ref: Review of Preventive & Social Medicine Vivek Jain 7th edition, Pg 112-113

20.A 65 yrs male has testicular tumor. He most likely has

a. Germ cell tumor b. Sertoli cell tumor
c. Teratocarcinema d. Lymphoma

➲ *Testicular cancer can occur at any age, but it is most common between the ages of 15 and 35 yrs (median age = 33). Testicular germ cell tumors are the most common solid tumor in this age group. There is a secondary peak in incidence after age 60. Seminoma is the most common histology in the older population.*
➲ *Germ cell cancers are sensitive to chemotherapy.*

Ref: Medscape.com

21.The denominator in crude birth rate is:

a. Total live births b. Mid year population
c. Total population d. Total number of deaths

➲ *Crude birth rate is the number of live births occurring among the population of a given geographical area during*

a given year, per 1000 mid-year total population of the given geographical area during the same year.

$$CBR = \frac{\text{No. of live births in a population in a geographical area in a given year}}{\text{Mid-year total population of the area in that year}} \times 1000$$

Ref: Review of Preventive & Social Medicine Vivek Jain 7th edition, Pg 94

22.Ptosis results due to ..... Injury.

a. CN II
b. CN III
c. VI VII
d. CN X

- *Ptosis refers to drooping of upper eyelid that usually results from a congenital or acquired abnormality of the muscles that elevate the eyelid.*
- *Oculomotor (CN III) innervates the levatorpalpebrae superioris to elevate the upper eyelid.*
- *An additional accessory smooth muscle, Muller's muscle, is innervated by sympathetic nervous system; contributes to 1-2mm elevation of upper eyelid ptosis in Horner's syndrome is due to the weakness of this muscle.*

23.The disease caused by "Borreliarecurrentis" is:

a. Reapsing fever
b. Katayama fever
c. Undulating fever
d. Quartan fever

- *Borreliarecurrentis causes Louse-borne relapsing fever.*
- *Arthropod-borne infection*
- *Course of fever = Sudden onset of fever, punctuated by an intervening afebrile period and then recurrent fevers.*
- *Katayama fever = Systemic hypersensitivity reaction to schistosome antigens and immune complexes that occur 3-8 weeks after infection. (Acute Schistosomiasis syndrome)*

Ref: medscape.com

24.Shaking palsy is due to

a. Lead poisoning
b. Arsenic poisoning
c. Mercury poisoning
d. $CuSO_4$ toxicity

- *Shaking palsy is due to mercury toxicity.*
  In elderly population, differential diagnoses are Parkinson disease, Alzheimer disease, Senile dementia.
- *Minamata disease = also due to mercury poisoning*
- *Seafood consumption can lead to mercury toxicity.*

Ref: medscape.com

25.GorlinGoltz syndrome is associated with

a. Odontogenic keratocyst
b. Dentigerons cyst
c. Primordial cyst
d. Radicular cyst

- *Gorlin-Goltz syndrome is a rare autosomal dominant disorder, consisting of multiple odontogenic keratocysts, multiple basal cell carcinomas, skeletal, dental, ophthalmic & neurological abnormalities and facial dysmorphism.*

Ref: Radiopaedia.org

26.Most common intracranial cause of sudden death is

a. Epilepsy
b. Subarachnoid hemorrhage
c. Cerebellar hemorrhage
d. Bacterial meningitis

- *Epilepsy is the most common intracranial cause of sudden death. There's a term 'Sudden Unexplained Deaths in Epilepsy Patients' to represent them.*

Common intracranial causes:

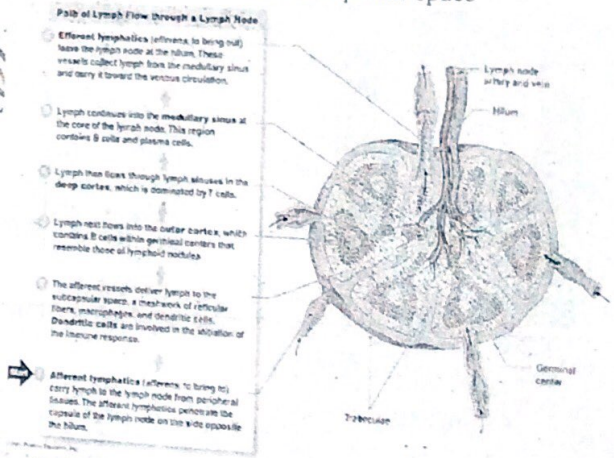
1. *Epilepsy*
2. *Intracranial hemorrhage: Traumatic or non-traumatic*
3. *Pyogenic meningitis*

Other causes of sudden deaths:

1. *Cardiac cause = Most common (Hypertrophic cardiomyopathy in young people)*
2. *Drug overdosing.*

27.The part of lymph node which is most dependent on thymus is

a. Outer cortex
b. Deep cortex
c. Medullary cords
d. Subcapsular space



Deep/inner cortex contains T-lymphocytes and is also known as Thymus dependent zone.

28.Anitschkow cells are

a. cardiac myocytes
b. Myocardial histiocytes
c. Endocardial cells
d. Endothelium

- *In acute rheumatic fever, 'Aschoff bodies' can be seen in the heart that consists of foci of T lymphocytes, occasional plasma cells and plump activated macrophages called Anitschow cells.*
  Histiocytes = Tissue macrophages.

Ref: Robbins Pathologic Basis of Disease 8th edition, Pg 565

29.Human breast milk has more ..... than cow milk

a. Calorie
b. Proteins
c. Lactose
d. Fat

Composition of milk from different types of animals:

	Protein%	Casein%	Whey Protein%	Fat%	Lactose%
Human	*1.2*	*0.5*	*0.7*	*3.8*	*7.0*
Cow	*3.5*	*2.8*	*0.7*	*3.7*	*4.8*
Buffalo	*4.0*	*3.5*	*0.5*	*7.5*	*7.5*
Goat	*3.6*	*2.7*	*0.9*	*4.1*	*4.7*

Ref: researchgate.net

30.The most common site of intracranial bleeding in hypertension is:

a. Internal capsule
b. Cerebral cortex
c. Subarachnoid space
d. Putamen

- *Putamen is the most common intracranial site for hypertensive bleed.*
- *In the decreasing order of frequency, most common sites of hypertensive intracranial bleeds are basal ganglia (putamen/caudate), thalamus, pons and cerebellum.*

Ref: casemed.case.edu (Neuroscience clerkship)

Answer

16.a.	Persistent depolarization	**17.d.**	Tachycarclia	**18.c.**	Hepatic duct bifurcation
19.d.	Rabies	**20.a.**	Germ cell tumor	**21.b.**	Mid year population
22.b.	CN III	**23.a.**	Relapsing fever	**24.c.**	Mercury poisoning
25.a.	Odontogenic keratocyst	**26.a.**	Epilepsy	**27.b.**	Deep cortex
28.b.	Myocardial histiocytes	**29.c.**	Lactose	**30.d.**	Putamen

31.Opium poisoning leads to

a. Shallow breathing
b. Rapid & deep breathing
c. Rapid & shallow breathing
d. None

- *Opioids inhibit Pre-Botzinger complex.*
- *Higher opioid doses cause reduction in tidal volume resulting shallow breathing.*

32.Most common indication of surgery in Crohn's disease is

a. Perianal disease b. Fistula in ano
c. Anorectal abscess d. Small bowel obstruction

Indications of surgery in crohn's disease:

1. *Failure of medical treatment.*
2. *If patient can't be weaned off systemic steroids even after 6 months.*
3. *Intestinal obstruction = most common indication.*
4. *Fistula formation, bleeding, malignant change*
5. *Perforation, Fulminant colitis*
6. *Perianal problems*
7. *Crohn's disease children with growth retardation.*

Surgery is to correct complications, doesn't cure the disease.

Ref: SRB's Manual of Surgery 5th edition, pg 868

33.A 3 month old baby can

a. Fixate on an object at 15 cm
b. hold head erect
c. sit with support
d. roll over

- *At birth, a baby can fixate and follow a moving person or dangling ring held 8-10 inches away upto a range of 45°.*
- *At 3 months, baby can hold his head erect steadily on being pulled to sit.*
- *Sits with support of pillows at 5 months and in tripod fashion at 6 months*
- *Can roll over at 5 months*

Ref: OP Ghai Essentials of Pediatrics 8th edition, Pg 53

34.Which of the following shifts O_2–Hb

a. Acidosis b. Hypercarbia
c. Hypoxia d. Fetal hemoglobin

Factors that shift O_2–Hb dissociation curve to left:

↑O_2 affinity so ↓unloading

- *↓pCo_2*
- *↓$[H^+]$*
- *↓Temperature*
- *↓DPG*
- *↑PH*
- *Fetal Hb*

Factors that shift O_2–Hb dissociation curve to right:

↓O_2 affinity so ↑unloading

- *↑pCO_2, $[H^+]$, temperature, DPG*
- *↓p^H*
- *Sulf–Hb*

Ref: BRS Physiology 5th edition, Pg 126-127

35.The effect of acidosis is

a. hypokalemia
b. shift of O_2–Hb dissociation curve-Bohr effect
c. acidity and heartburn
d. None

- *Acidosis means ↓p^H; this shifts O_2–Hb dissociation curve to the right, decreasing O_2 affinity so ↑unloading.*
- ***Bohr's effect:*** *Hemoglobin's oxygen binding affinity is inversely related both to acidity and to the concentration of carbon dioxide.*

Ref: BRS Physiology 5th edition, Pg 126

36.Breast cancer with best prognosis is

a. ER+, PR+, HER2+ b. ER+ PR– HER2–
c. ER+, PR+ HER2– d. ER–, PR–, HER2–

NMCLE EASY ENTRY SAMIKSHA PUBLICATION

ER +'R+ HER2-aka Luminal A

- 7% of all breast cancer cases
- Ist prognosis
- Most common subtype for every race, age and poverty level

ER— iR- HER2-aka 'Triple negative'

- 1% of all cases
- Worst prognosis
- most common in non-Hispanic blacks

ER→ iR+ HER2+ aka 'Luminal B'

- 1% of all cases

ER— IR- HER2+ aka 'HER2 enriched'

- 5% of all cases

Ref: cancer.gov

37.Alcohol detection from a putrefied body is done from

a. Stomach b. Liver
c. Blood d. Vitreous humor

- In a decomposing body, due to bacterial production, alcohol level is altered in other samples and unreliable.
- Vitreous humor doesn't suffer such changes.

Ref: The Essentials of Forensic Medicine, KSN Reddy 33rd edition, Pg 578

38.Halothane results

a. increases GI motility
b. increases cerebral blood flow
c. increases cerebral metabolism
d. pumonary vasoconstriction upon hyper ventilation

Volatile anesthetic	Cerebral blood flow	Cerebral metabolic rate
Isoflurane	↑	↓
Sevoflurane	↑	↓
Halothane	↑↑↑	↓
Nitrousoxide	↑	↑

- Halothane use can cause hepatitis.
- Halothane, by dilating cerebral vessels, increases cerebral blood flow but at the same time, cerebral activity is decreased, leading to EEG slowing and modest reductions in metabolic oxygen requirements.

Ref: Morgan and Mikhail's Clinical Anaesthesiology 5th edition, Pg 165

39.Rectal examination in gynecology is not done for

a. Rectal symptoms
b. Mullerian agenesis
c. Staging of ovarian cancer
d. differentiate rectocele &enterocele

- Staging of ovarian cancer is done following laparotomy (staging laparotomy). Staging helps to assess prognosis as well as make a better choice of adjuvant therapy.

Ref: DC Dutta's textbook of Gynecology 7th edition, Pg 305.

40.A female has breast and pubic hair but not uterus and vagina, she has

a. Mullerian agenesis
b. Androgen insensitivity syndrome
c. Klinefelter syndrome
d. Turner's syndrome

Mullerian agenesis: Mayer-Rokitansky-Houser Syndrome

- Absence or hypoplasia of internal vaginal canal; may have absence of uterus & fallopian tubes
- Female karyotype, normal ovarian function, normal growth and development
- Ovaries are not mullerian structures
- The first sign of this condition is the failure to menstruate by the age of 15 to 18
- Pelvic USG and MRT can assess anatomic abnormality.
- Associated with urinary/renal tract abnormalities, skeletal (spine) anomalies

Androgen insensitivity syndrome:

- Genotype XY
- Decreased public & axillary hair
- Intra-abdominal testicles
- Gonads removal recommended after puberty due to increased risk of malignancy.

Turner's syndrome: Genotype 45, XO
Klinefelter's syndrome: Genotype: 47, XXY

Ref: DC Dutta's Textbook of Gynecology, 6th edition, pg 44

41.Which of these is not a complication of intertrochanteric fracture of femur?

a. Avascular necrosis b. Malunion
c. Shortening of limb d. Osteoarthritis

Intertrochanteric fracture occurs along a line between greater trochanter & lesser trochanter.

- Totally extracapsular
- Seen in elderly patients and more in females

C/F: Pain, marked shortening of the lower limb, complete external rotation deformity, swelling, ecchymosis & tenderness over the greater trochanter.

Complications: Due to cancellous nature of bone, heals well unlike fracture neck of femur.

- Malunion is quite common
- Coxa vara,non-union (<2%)
- Traumatic osteo arthritis

Note: avascular necrosis is seen in fracture of neck of femur.

Ref: Essential Orthopaedics, Maheshwari 4th edition, pg 134-135

42.Pyogenic arthritis can lead to

a. Bony ankylosis b. Fibrous ankylosis
c. Pseudoarthrossis d. None

- Though fibrous ankylosis can precede bony ankylosis, 'a' is a better choice as pyogenic arthritis is more recognised to

be a common cause for bony ankylosis besides pott's spine.

Ref: Essentials of Orthopaedics, Maheshwari 5th edition, Pg 177

- Tom smith arthritis = Septic arthritis of hip hoint seen in infants.
- Sites of septic arthritis in i.v. drug abusers:
  a. Sacroiliac joint
  b. Pubic symphysis
  c. Sternal articulations.
- In nail pricks, pseudomonas aeruginosa is the organism, the most common site is the second metatarsophalangeal joint.

43. Most common manifestation of hemolytic transfusion reaction in a mismatched blood transfusion is:

a. Decreased urine output
b. Fever with chills
c. Flank pain
d. Jaundice

- Rapid hemolysis of as little as 10ml of incompatible blood can produce symptoms of an acute hemolytic transfusion reaction.
- The most common presenting symptom is fever with or without chills or rigors.
  a. Mild reaction – abdominal, chest, flank or back pain
  b. Severe reaction – hypotension, dyspnea, flank pain, shock with or without accompanying DIC, red urine.
- Risk: 1 in 38,000 units transfused

Ref: Morgan and Mikhail's Clinical Anesthesiology 5th ed., Pg 1172

44. Iceberg phenomenon represents

a. apparent &inapparent infection
b. symptomatic & asymptomatic
c. diagnosed & undiagnosed
d. diseased &undiseased

- The tip of the iceberg → What the clinicians see
- Submerged → Part explored & made visible by the epidemiologists
- Diseases with visible tip ⇒ Tetanus, Anthrax, Rabies

Ref: Review of Preventive & Social Medicine Vivek Jain 7th edition, pg 59-60

45. Skin grafting is absolutely centra indicated in infection with

a. Pseudomonas
b. β-hemolytic streptococci
c. Staph aureus
d. E. coli

- β-hemolytic streptococcal infection is a contraindication for skin grafting. One of pre requisites for skin grafting is beta hemolytic streptococci load less than 10^5 per gram of tissue.

Ref: SRB's manual of surgery 5thed, Pg 321

- Skin graft can't be placed over unhealthy granulation tissue, bone without periosteumand cartilage without perichondrium.
- Autograft: On the same patient
- Isograft: Genetically identical twins
- Allograft:Genetically different members; but within a species .
- Xenograft: Different species.

Answer

31.a	Shallow breathing	**32.d**	Small bowel obstruction	**33.b**	hold head erect
34.d	Fetal hemoglobin	**35.b**	shift of O2-Hb dissociation ...	**36.c.**	ER+, PR+ HER2-
37.d	Vitreous humor	**38.b**	Increases cerebral blood...	**39.c**	Staging of ovarian cancer
40.a	Mullerian agenesis	**41.a**	Avascular necrosis	**42.a**	Bony ankylosis
43.b	Fever with chills	**44.a**	apparent & inapparent...	**45.b**	β-hemolytic streptococci

46. "Black death" is due to

a. Anthrax
b. Bubonic plague
c. Malaria
d. Cholera

- Black Death is a pandemic that ravaged Europe between 1347 and 1351.
- **Cause:** Plague (Yersinia Pestis)
  - About 25 million people died in Europe from the plague during the Black Death.

Ref: Bubonic Plague: The Black Death by Stephen Person

47. Most important factor for Fracture healing is:

a. Hematoma organization
b. Immobilisation
c. Traction
d. Pain management

- The same question was asked previous year. Please look at the explanation written.

48. March fracture most commonly affects

a. Tibia
b. Femur
c. Meta-tarsal
d. Fibula

- "March Fracture" is a term applied to a fracture occurring typically in infantry recruits during training periods involving a great deal of marching.
  - aka stress/fatigue fracture
  - They occur due to repeated concentrated trauma to a normal bone, classically the 2nd metatarsal of the foot but can occur in other weight bearing bones of the lower limb and pelvis.

Ref:Apley's System of Orthopaedics and Trauma, 9th edition, Pg 463

49. In a population of 2000, 10 got a disease in the first year and the same number the next year calculate the prevalence

a. 1/1000
b. 2/1000

c. 4/1000 d. 10/1000

➲ Pevalence = Incidence × Duration

➲ S. prevalence = $\frac{10}{2000} \times 2 = 1/1000$.

Ref: Review of Preventive & Social Medicine Vivek Jain 7th edition, Pg 96

50.A man presents with loose watery stool without fever. He had undergone ileal resection & completed ATT course for TB stricture 2 years back What is appropriate management?

a. Metronidazole b. Cholestyramine

c. Ripeat ATT d. Codeine

➲ *As the patient had undergone ileal resection, he has bile acid malabsorption. These bile acids in the intestinal lumen stimulate electrolyte and water secretion, which results in loose to watery stools.*

➲ *These patients respond very well to bile acid binders like cholestyramine.*

➲ *In more severe bile acid malabsorption, steatorrhea is seen. This group of patients is best treated with a low fat diet supplemented with medium-chain triglycerides.*

51.A young female of 23 presents with yellow vaginal discharge and itchiness. The organism was seen on wet mount of the discharge. Identify the organism:

a. Gardnerella vaginalis

b. Candida albicans

c. Trichomonas vaginalis

d. Chlamydia trachomatis

	Color	PH	Pruritus	Wet mount
Trichomoniasis	Greenish yellow	≥4.5	+++	Motile organisms
Candidiasis	Curdy white	<4.5	++	Hyphae & buds
Bacterial Vaginosis	Gray white to green yellow	≥5	Non-irritating	Clue cells
Chlamydia	Mucopurulent	<4.5	–	Not seen

Ref: DCDutta's textbook of Gynecology, 7th edition, Pg 134

52.HIV positive patient with CD_4 count <90/HL develops sputum positive pulmonary TB. What is appropriate next step?

a. Isoniazid & Rifampin

b. Isoniazid, Rifampin, Pyrazinamide, Ethambutol & Streptomycin

c. Isoniazid, Rifampin, Ethambutol, Pyrazinamide and Antiretroviral therapy

d. No treatment

➲ *New HIV/AIDS treatment guidelines recommend use of antiretroviral regimen irrespective of CD_4 count or stage of disease. Since CD_4 count <90/μL, the person is at high priority of antiretroviral regimen.*

➲ *Since the patient has now developed sputum positive TB, Anti-tubercular treatment needs to be initiated with 4 first line drugs "Intensive phase".*

53.Compensation in medical malprasciss is under

a. Muluki Ain IlaajGarneko Mahal

b. Consumer Protection Act

c. Nepal's Constitution

d. ICU guidelines

➲ *"Muluki Ain: IlajGarneko Mahal" states about compensation regarding medical malpraxis. But the points stated seem so irrelevant in the context of our country.*

54.A solider while marching fell on ground and was hit on chin. What is the likely fracture he would sustain?

a. Zygomatic fracture

b. Symphysis menti and condyle

c. Both condyles

d. Parasymphyseal fracture

➲ *Fall upon chin most commonly results symphyseal fracture which has a high chance of associated unilateral or bilateral condylar fracture.*

55.An old man is diagnosed to have carcinoma of pancreas. In his body cells, which phenomenon is not prominent?

a. Apoptosis b. Autophagy

c. Necrosis d. None

➲ *One of the hallmarks of cancer is the ability of malignant cells to evade apoptosis.*

Ref: biooncology.com

56.The most common organism associated with AOM is:

acute otitis media

a. Adenovirus

b. Respiratory Syncytial Virus

c. Corona virus

d. Rhino virus

➲ *Acute otitis media: Microbiology*

1. ***Bacteria:*** *Streptococcus pneumoniae*
   Non typeableHemophilusinfluenzae
2. ***Viruses:*** *Respiratory syncytial virus*
   Picorna viruses (eg; Rhinovirus, enterovirus)
   Influenza, Adeno virus

Others: *Mycoplasma pneumoniae*
Chlamydia trachomatis

Ref: UpToDate

57.In which of the following condition, uridine glucoronosyl transferase enzyme is deficient?

a. Gilbert syndrome

b. Rotor syndrome

c. Criggler-Najar syndrome

d. Dubin-Johnson syndrome

➲ *Gilbert's syndrome:*
- *Decreased production of glucoronyl transferase*
- *Rare autosomal dominant trait*
- *More common in men*
- *Usually asymptomatic hyper bilirubinemia*
- *Liver function tests are normal.*

➲ *Crigler-Najjar Syndrome:*
- *Low activity of glucoronyl transferase (conjugating enzyme)*
- *Rare inherited disease*
- *Severe hyperbilirubinemia in neonates (unconjugated)*
- *Kernicterus, early death.*

➲ *Dubin-Jonhnson Syndrome:*
- *Defect in transfer of conjugated bilirubin into the biliary canaliculi*
- *Conjugated hyperbilirubinemia*

➲ *Rotor syndrome:*
- *Conjugated hyperbilirubinemia*
- *Problem in excretion of bilirubin*

Ref:Textbook of Biochemistry for Medical Students by DM VASUDEVAN

58.A child is with bilateral 3.5 D refractive error. Which is most likely to be the cause of isometric amblyopic?

a. Myopia b. Hyperopia
c. Astigmatism d. Cataract

➲ *Since the child only has spherical correction, astigmatism is ruled out. Out of hyperopia and myopia, hyperopia is more likely to result isometric amblyopia.*

59.A young girl had menarche at 13. Now she is 15 and is complaining about excessive vaginal bleeding. What is the most likely cause?

a. Sarcoma botryoides
b. Fibroid
c. Cervical polyp
d. Simple endometrial hyperplasia

➲ *Endometrial hyperplasia occurs due to unopposed estrogenic stimulation. At such a young age, menstrual cycles are anovulatory. Due to which, endometrial lining becomes thickened due to the effect of estrogen alone.*

Ref: DC Dutta's Textbook of Gynecology 7th edition

60.Vitelline vein forms

a. Ligamentum vanosum
b. Ligamentum teres
c. Portal vein
d. Sueriorvenacava

➲ *In the fifth week of intrauterine life, three pairs of major veis can be distinguished*
- *Vitelline veings, or omphalomesenteric veins, carrying blood from the yolk sac to the sinus venosus*
- *Umbilical veins, originating in the chorionic villi and carrying oxygenated blood to the embryo*
- *Cardinal veins, draining the body of the embryo proper*

➲ *Vitelline veins contribute to the hepatic sinusoids, hepatocardiac portion of the inferior venacava, prrtal vein and superior mesenteric vein*

Answer

46.b.	Bubonic plague	**47.b.**	Immobilisation	**48.c.**	Meta-tarsal
49.a.	1/1000	**50.b.**	Cholestyramine	**51.c.**	Trichomonas vaginalis
52.c.	Isoniazid, Rifampin, ...	**53.a.**	Muluki: Ain IlaajGarneko...	**54.b.**	Symphysis menti and condyle
55.a.	Apoptosis	**56.b.**	Respiratory Syncytial Virus	**57.a.**	Gilbert syndrome
58.b.	Hyperopia	**59.d.**	Simple endometrial ...	**60.c.**	Portal vein

61.Scanty painless foul smelling discharge from the ear is associated with?

a. mastoid abscess b. acute mastoiditis
c. Cholesteatoma d. foreign body ear

➲ *Cholesteatoma is a tissue growth which contains keratinisingsquamous epithelium and is located in the middle ear or in the mastoid cavity.*

There are 2 types of cholesteatoma:

a. Acquired: *Caused by any pathology in the middle ear cavity leading to keratin accumulation. They are associated with TM pathology.*

b. Congenital: *They are present since birth and are epidermal cysts in the middle ear cavity. They are associated with normal tympanic membrane.*
- *Presence of cholesteatoma is always suggestive of atticoantral type of chronic suppurative otitis media. The 2 types of CSOM can be distinguished by the nautre of discharge as:*

COM-Squamous	*COM-Mucosal*
Scanty	*Profuse*
Painless	*Also painless*
Foul smelling	*Not foul smelling*

➲ *Mastoid abscess, acute mastoiditis and FB ear are all painful*

➲ *Mastoid abscess and acute mastoiditis rarely present with otorrhea.*

Ref:Textbook of ENT and Head and Neck Surgery Shrivastav 2nd edition PN 52

62.Which of the following is the most common site of sinusitis in children?

a. frontal sinus b. ethmoidal sinus
c. maxillary sinus d. sphenoidal sinus

➲ *Only 2 sinusesare present at birth: Maxillary sinus and Ethmoidal sinus (Anterior & posterior group) sphenoid sinus appears at 4 years of age and frontal sinus at 6 years of age.*

➲ *As ethmoidal air sinus is made up of complex bony*

NMCLE EASY ENTRY SAMPLE

labyrinth of thin walled cells, it is more prone to develop infection in children.

- The groups of ethmoidal air cells drain into superior meatus (posterior group) and middle meatus (anterior group).
- As the ethmoidal sinuses are very closely related to meninges superiorly and orbit laterally, infection to ethmoidal sinuses may travel to cause meningitis or orbital cellulitis in children, this being one reason as to why meningitis is more common in children.
- Haller cells are infraorbital ethmoidal air cells lateral to the lamina papyracea (papery thin bone separating ethmoidal cells from orbit).

Ref: Textbook of ENT and Head and Neck Surgery Shivastav 2nd edition PN 118

63. Which of the following arteries is embolized in the management of refractory epistaxis in a case of angiofibroma? Options have been typed wrongly

a. Short acting harmones
b. Stored in plasma extracellularly
c. actve on extracellular receptois
d. derved from amino acid phenylalanine

- The main supply to an angiofibroma comes from the internal maxillary artery and sometimes from ascending pharyngeal or vidian artery.
- Maxillary artery is a terminal branch from external carotid artery which arises behind the neck of the lower maxilla (i.e. mandible) – It has 3 parts: mandibular, pterigoid and pterygomaxillary portion. Middle meningeal artery (MC site of bleed in EDH) arises from mandibular portion and internal maxillary artery (to be ligated in nasopharyngeal angiofibroma) comes from pterygomaxillary portion.
  Anterior and posterior ethmoidal arteries supply the septum color lateral nasal wall but not an angiofibroma.
- Ligation of internal maxillary artery for epistaxis control is done within the pterygopalatine fossa.
- Greater palatine artery is another branch of maxillary artery that supplies the hard palate & nasal septum but not the angiofibroma tissue.

Ref: Diseases of Ear, Nose and Throat and Head and Neck Surgery, Dhingra 6th edition PN 280

64. Thyroid hormones are:

a. Short acting hormones
b. Stored in plasma extracellularly
c. active on extracellular receptors
d. derived from amino acid phenylalanine

- Thyroid hormones are short acting hormones: TSH is also a short acting hormone.
- Thyroid hormones are stored extracellulary in thyroid follides; but not in plasma.
- Thyroid hormones, being steroid hormones, act via intracellular nuclear receptors which contain TRH (Thyroid Response Element).
- Thyroid hormones are derived from amino acid tyrosine.

Ref: BRS Physiology 6th edition PN 234

65. Which of the following bone tumors is uncommon before the age of 20 years?

a. osteosarcoma b. Osteochondroma
c. giant cell tumor d. Ewing's sarcoma

- As giant cell tumor is a tumor of epiphysis and epiphyseal fusion will not have occurred before the age of 20 years, it is uncommon to see giant cell tumor before 20.
- The most common bone tumors according to age are:
  1st decade: Ewing's sarcoma
  2nd decade: Osteosarcoma
  After skeletal maturity: Giant cell tumor
  Usually occurs at the age of 20 years
  After 40 years: metastasis

Ref: A textbook of Orthopedics Maheshwori 5th edition PN 237

66. Which of the following compounds is accumulated in a case of megaloblastic anemia?

a. methylmalonic acid b. succinylcoA
c. tetrahydrofolic acid d. pyrimidine phosphate

Methylmalonyl COA
$\xrightarrow{\text{isomerization rx}^n}$ Succinyl COA
enzyme methyl malonyl COA mutase

- The enzyme here requires a prosthetic group (adenosylcobalamin) which is formed from cynacobalamine (vit. B12).
- Hence, in a deficiency of vit. B12, there are increased plasma and urine levels of methylmalonic acid, which is incorporated into fatty acids leading to abnormal myelin formation and causing neurological manifestations.
- Option 'c', i.e. tetrahydrofolic acid is also a product involved in DNA synthesis and requires vit. B12. However, the levels of tetrahydrofolic acid are decreased in vit. B12 deficiency.

Ref: Robbins and Cotran pathologic basis of disease 8th edition PN 657

67. A 68 years old man died of severe Alzheimer's disease. On autopsy of brain, which of the following features is the most likely to be seen?

a. Neurofibrillary tangles
b. Lewy body formation
c. Pannus formation
d. Negri bodies

- Pathological features of Alzheimer's disease include: @ PANT
  i. Plaques: extracelluar - made up of AB amyloid
  ii. Amyloid angiopathy: accumulation of AB amyloid in arterioles
  iii. Neurofibrillary Tangles: Cytoplasmic silver staining inclusions which represent abnormally phosphorylated Tau-protein

➲ *Lewy bodies are eosinophilic cytoplasmic inclusions in substantia nigra that are seen in Parkinson's disease.*

➲ *Pannus is hypertrophied synovium seen in Rheumatoid Arthritis.*

Ref: Robbins and Cotran pathologic basis of disease 8th edition PN 1314

68. **Concerns are raised when a 64 year female patient has been recently diagnosed with type 2 DM and is going to be started on oral hypoglycemic agents. Which of the following anti-hyperglycemic agents is least likely to lead to hypoglycemia?**

a. metformin b. glyburide
c. chlorpropamide d. insulin

➲ *Metformin is a biguanide which decreases hepatic production of glucose.*

➲ *Drugs that act as insulin secretagogues (sufonyloureas: Chlorpropamide, glibenclamide, glyburide) or insulin sensitizers (thiazolidinediones) mimic the action of insulin (which itself causes hypoglycemia), thereby leading to hypoglycemia.*

➲ *Acarbose (α-glycosidase inhibitor) does not lead to hypoglycemia.*

Ref: Davidson's Principles and Practice of Medicine 22nd Edition PN 822

69. **Which drug used in the treatment of leprosy has been found to be associated with red-brown pigmentation of skin?**

a. Dapsone b. Clofazimine
d. Rifampicin d. Dexamethasone

➲ *S/E of anti-leprosy drugs:*

- *Clofazimine: skin discoloration, ichthyosis, conjunctival and corneal pigmentation.*
- *Dapsone: Hemolysis, methemoglobinemia, agranulocytosis*
- *Rifampicin: Facial flushing orange discoloration of urine and other body secretions.*
- *Ofloxacin: Prolonged QT interval, torsadesde pointes.*
- *Minocycline: Anemia, thrombocytopenia, conjunctival discoloration.*

➲ *Drug causing hyperpigmentation:*

- *Photosensitizing drugs*
- *Amiodarone*
- *ACTH*
- *Gold*
- *Estrogens and progesterone*
- *Hydroxychloroquine*

Ref: KD Tripathi Essential Pharmacology 7th edition PN 782

70. **Which is the fastest effective treatment of hyperkalemia?**

a. i.v. calcium gluconate
b. i.v. insulin & dextrose
c. i.v. sodium polystyrene
d. hemodialysis

➲ *Features of alteration in K^+ levels:*

	Clinical Features	ECG changes
Hypokalemia	Arrhythmias, weakness	U waves, flat T waves
Hyperkalemia	Arrhythmias, weakness	Wide QRS & peaked T waves
@ Remember	Twaves magnitude α $[K^+]$	(i.e. KT)

➲ *Management of hyperkalemia*

a. *i.v. calcium gluconate → stabilizes myocardium, therapy preevnting arrhythmias*
b. *i.v. dextrose and insulin → Insulin shifts K^+ Inside the cells; dextrose is added to prevent hypoglycemia.*
c. *K^+ binding renins: Like sodium polystyrene are given to increase g.i. binding to postassium and increase excretion of potassium.*
d. *i.v. $NaHCO_3$: Creation of alkaline environment also shifts K^+intracellularly*

Ref: Davidson's Principles and Practice of Medicine 22nd Edition PN 442

71. **Which is the most common complication after esophagectomy?**

a. Recurrent laryngeal nerve palsy
b. Pulmonary collapse & hypoxia
c. arrhythmias
d. Hemorrhage

➲ *Atelectasis occurs in 3% of cases (most common) and leads to hypoxia. It may require prolonged positive pressure ventilation.*

➲ *Post-operative hemorrhage can be mediastinal or intraperitoneal.*

➲ *As the recurrent laryngeal nerve innervates the upper esophageal sphincter and is located in the tracheo-esophageal groove,injury to RIN may also occur as a complication of esophagectomy.*

➲ *Other complications include cervical esophagogastric anastomotic leakage, gastric tip necrosis and rarely, chylothorax.*

Ref:https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3693150/

72. **A 22 years female comes to OPD. She is a student & she has a habit of reading all the paragraphs of a**

book to make sure that she hadn't missed anything while reading it previously. What is this psychopathology known as?

a. Obsession b. Compulsion
c. altuism d. denial

- Obsession: Any intriguing thought, belief, feeling or senation, that causes severe distress, which are partially relieved by the performance of repetitive actions that are performed by the individual to get rid of obsession even though the individual realises the irrationality of them.
- These behaviors are inconsistant with one's own beliefs andattitudes.
- Denial is actually the avoidance of awareness of some painful anxiety.
- Altruism is the process of alleviating negative feelings via unsolicited generosity that provide satisfaction.

Ref: A short textbook of Psychiatry, Ahuja, 7th edition PN 95

73. Which of the following doesn't act on intracellular receptors?

a. thyroid hormones b. vit. D
c. Steroid d. Insulin

- Insulin is a non-steroidal (polypeptide) hormone that being lipophobic, cannot diffuse through the cell membrane and so, binds to an extracellular receptor which acts via JAK-STAT pathway.
- Steroid hormones (thyroid hormones, vit. D, Steroids) are lipophilic and diffuse thorugh the cell membrane to act in a nuclear or cytoplasmic receptor.
- However, steroid hormones are also hydrophobic and so must circulate bound to specific globulins thereby increasing their solubility.
- Hormones with intracellular receptors are: Progesterone, Estrogen, Testosterone, Cortisol, Aldosterone, T3/T4, vitamin D.

Ref: BRS Physiology 6th edition PN 229

74. A 32 years female presents with bitemporal hemianopia, oligomenorrhea and galactorrhea. What will be your provisional diagnosis?

a. Acromegaly
b. Empty sella syndrome
c. Cushing disease
d. Prolactin secreting macroadenoma

- The presence of bitemporalhemianopia suggests that the lesion is affecting the optic chiasma in the visual pathway. As the pituitary in the sella lies very close to optic chiasma, a mass (most commonly a macroadenoma) arising from pituitary could be a cause of these features.
- As patient is also presenting with features suggestive of hyperprolactinemia (oligomenorrhea&galactorrhoea), prolactin secreting macroadenoma is the most likely cause.
- Cushing disease is characterized by features of pituitary adenoma (bitemporal hemianopia, headache) along with features of hypercortisolism (osteoporosis, striae, easy infections).
- Empty sella syndrome is very less likely to have bitemporal hemianopia. Moreover, it presents with features of hypopituitarism.

Ref: Davidson's Principles and Practice of Medicine 22nd Edition PN 788

75. Which is the most common presentation of nasopharyngeal carcinoma?

a. anosmia
b. epistaxis
c. Acute Otitis Media
d. Cervical lymphadenopathy

- The clinical presentations of nasopharyngeal carcinoma can be classified as follows:
  a. Nodal: Swelling in the neck, often bilateral (most common)
  b. Nasal: Nasal discharge, recurrent epistaxis, nasal obstruction
  c. Otological: Unilateral hearing impairment
  d. Neurological: Symptoms related to CN III to VI and IX to XII
  e. Orbital: Diplopia, protrusion of eyeball, blurring of vision.
- Most common presentation of oropharyngeal carcinoma is: throat discomfort & pain
- Most common presentation of hypopharyngeal carcinoma is: feeling of lump in throat
- Most common presentation of laryngeal carcinoma is:
  Glottic → hoarseness
  Supraglottic → throat discomfort
  Subglottic → progressive dyspnea

Ref: Textbook of ENT and Head and Neck Surgery Shrivastav 2nd edition PN 225

Answer

61.c	Cholesteatoma	62.b	sphenoidal sinus	63.a	Short acting harmones
64.a	Short acting hormones	65.c	Giant cell tumor	66.a	methylmalonic acid
67.a	Neurofibrillary tangles	68.a	Metformin	69.b	Clofazimine
70.a	i.v. Calcium gluconate	71.b	Pulmonary collapse and ...	72.b	Compulsion
73.d	Insulin	74.d	Prolactin secreting ...	75.d	Cervical lymphadenopathy

76. Which is an abnormal finding in a 35 year old healthy asymptomatic male?

a. 2-3 epithelial cells/HPF
b. 5-6 RBC's/HPF
c. 3-4 pus cells/HPF
d. none

- Presence of gross or microscopic hematuria in an

asymptomatic male is always abnormal.

- Presence of few RBC's in urine in female may sometimes be normal, especially if the sample is taken in menstrual or immediate post-menstrual period.

77.Which is not a component of tetralogy of fallot?

a. LV hypertrophy
b. Ventricular septal defect
c. Pulmonary stenosis
d. Overriding of Aorta

- Components of Tetralogy of Fallot: Ventricular septal defect, pulmonary stenosis, Right ventricular hypertrophy and overriding aorta.
- Pentalogy of fallot = TOF ⊕ ASD
- Tetralogy of fallot is characterized by cyanotic spells: with the cyanosis being relieved by assuming a squatting position.
- Most common CHD = VSD
- Most common cyanotic CHD = TOF
- Blalock-Taussing shunt is used in the management of TOF
- TOF is caused by anteriosuperior displacement of the

76.d	5-6 RBC's / HPF	77.a	LV hypertrophy	78.d	4th week of life
79.c	Cavus-Adductus-...	80.b	Endonuclease	81.d	Arthritis
82.a	Cervix	83.c	Timely episiotomy as...	84.a	Supportive
85.b	Achondroplasia	86.a	moon shaped fibrin and ...	87.b	Renal
88.a	Expansion of costo-chondral..	89.d	Pro-NT-BNP	90.c	Breast carcinoma

development starts from the protrusion of lung bud ... distal end of respiratory diverticulum during week 4.

- Stages of lung development

Stage	Duration (weeks)	Development
Embryonic	4-7	upto tertiary bronchi
Pseudoglandular	5-17	upto terminal bronchioles
Canalicular	17-25	upto alveolar ducts
Saccular	26 weeks-birth	upto terminal sacs
Alveolar	36 weeks-8 years	upto adult alveoli

- Surfactant synthesis starats from mid-canalicular phase.
- Pneumocytes start developing from mid-canalicular phase.

Ref: Langmann's Medical Embryology 12th edition PN 201

79.The correct sequence of correction of deformity in congenital TalipesEquinus Varus (CTEV) is:

a. Adductus-cavus-Equinus-varus
b. Cavus-Adductus-Equinus-Varus
c. Cavus-Adductus-Varus-Equinus
d. Equinus-Varus-Adductus-Cavus

- CTEV (clubfoot) is a deformity characterized by inversion of hindfoot, adduction of forefoot and limited dorsiflexion.
- Equinus deformity occurs at the ankle joint and inversion (varus) occurs at the subtalar joint.
- Treatment of CTEV should begin as soon as possible after birth.
- In newborn, the foot should be manipulated by mother and Dennis Brown splint should be applied.
- Kite's procedure involves correction in the order of A→I→E (Adduction→Inversion→Equinus)
- Ponsetti's technique involves correction in the order of C→A→V→E (Cavus→Adductus→Varus→Equinus)

Ref: A textbook of Orthopedics Maheshwori 5th edition PN 214

80.What is the name of the enzyme used for genetic mapping of eukaryotic cells?

a. DNA polymerase b. Endonuclease
c. Telomerase d. ligase

- Restriction endonuclease cleaves the genetic materials at specific sites into small fragments, which can later be used to identify the Loci of gene in DNA mapping.
- Telomerase is an enzyme that inserts a repeat sequence at the end of DNA or chromosome for protecting from DNA damage or fusion.
- DNA polymerase is an enzyme that synthesizes DNA molecules from existing DNA strands to create two new strands i.e. by adding nucleotides to 3' end of a DNA strand.
- DNA ligase catalyses the formation of a phosphodiester bond leading to the joining of DNA strands together.

Ref: https://en.wikipedia.org/wiki/Restriction enzyme

81.Which of the following is not a part of the clinical manifestations seen in congenital Rubella syndrome?

a. Cataract b. SNHL
c. PDA d. Arthritis

- Congenital Rubella syndrome manifests as a triad of cataract, deafness and congenital heart disease (most common being PDA).
- It is also characterized by "blueberry muffin" rash.
- Remember: Arthritis is a manifestation of rubella infection in mothers but not in neonates.
- Features of CRS do not occur when rubella is contracted by the mother after 20 weeks of gestation.

Ref: Essential Pediatrics OP Ghai 8th edition PN 272

82.Nabothianfollicles are located in:

a. Cervix b. vagina
c. uterus d. Oviduct

- Nabothian follicle is a mucus filled cyst on the cervix. It is formed when stratified squamous epithelium of the ectocervix grows over the simple columnar epithelium of

th endocervix. This growth blocks the crypts of cervix and their outflow tracts thereby trapping their mucus seretions and leading to Nabothian cyst/ follicle formation.

- Bartholin gland is located most commonly at the junction of anterior 2/3rd of labia majora with the posterior 1/3rd at inner side.
- Gartner's cyst is located in anterolateral wall of vagina at 10 o'clock position.

Ref: D C Dutta textbook of Gynecology 6th edition PN 268

83. Which of the following measures is not effective in preventing perineal tear in a vaginal delivery?

a. Slow delivery of head in between contractions
b. Effective perineal guarding
c. Timely episiotomy as a routine
d. Delivery by flexion of head

- It is controversial whether routine episiotomy has got any major benefits (DC Dutta 9th ed. PN 528)
- Other options prevent perineal injury, episiotomy is itself a perineal injury.

Ref: Sikshi Arora, Self Assessment and Review in Obstetrics 9th edition, PN 79

84. A 3 years child presented with fever of 103° F. On examination, tonsils are normal with slightly congested throat. Other systemic examinations are within normal limits. Which treatment measure would you prefer?

a. Amoxiclav and PCM b. Supportive
c. Erythromycin d. Benzyl penicillin

- The history and examination suggest a viral etiology for pharyngitis. Hence the treatment is supportive.
- As the tonsils are normal, the diagnosis of acute tonsilitis or peritonsilar abscess are ruled out.
- As there is no any pseudomembrane or lymphadenopathy on examination of throat, the possible diagnosis of diphtheria is also ruled out. For suspected bacterial pharyngitis, Azithromycin is the drug of choice.

Ref: Textbook of ENT and Head and Neck Surgery Shrivastav 2nd edition PN 227

85. Disproportionate short stature occurs due to:

a. Constitutional growth delay
b. Achondroplasia
c. Hypothyroidism
d. Growth hormone deficiency

- It is an autosomal dorminant condition in which there is failure of longitudinal bone growth (endochondral ossification) resulting in short limbs.
- US: LS (Upper Segment: Lower Segment) ratio is used as the marker for proportionate or disproportionate short stature.
- Normal value of US: LS ratio is:
  - 1.7 at birth
  - 1.3 at 3 years
  - 1.1 at 6 years
  - 1 at 10 years
  - 0.9 in adults
- Conditions where US: LS ratio is normal are causes of proportionate short stature: and conditions where this ratio is altered cause disproportionate short stature.
- Increase in US: LS ratio → Rickets, Achondroplasia, Untreated congenital hypothyroidism
- Decrese in US: LS ratio → Spondyloepiphyseal dysplasia, vertebral anomalies
- Besides these, genetic conditions such as Turner syndrome, Down syndrome, Prader-willi syndrome also lead to disproportionate short stature.

Ref: Essential Pediatrics OP Ghai 8th edition PN 36

86. The histopathological finding of rapidly progressive glomerulonephritis is:

a. moon shaped fibrin and macrophage
b. "wire-looping' of capillaries
c. enlarged &hypercellular glomeruli
d. tram-track appearance of glomerular basement membrane

Type of GN	Light microscopy	Immunofluorescence/ Electron microscopy
Acute PSGN	Enlarged, hypercellular glomeruli	Subepithelial immune complex humps
RPGN	Crescents of fibrin and plasma proteins with macrophages	Linear/ Pauci-immune or granular immunofluorescence
Diffuse proliferative GN	wire-looping of capillaries	Granular, subendothelial intramembranous Ig4 deposition
IgA Nephropathy	Mesangial proliferation	Mesangial IgA deposits.
Membrano proliferative GNH	GBM splitting → tram-track appearance	GBM splitting → tram-track appearance

Ref: Robbins and Cotran pathologic basis of disease 8th edition PN 921

87. A 23 years female has recently been diagnosed with SLE. Which of the following organ-system complications is she most likely to have throughout her life?

a. Hematological b. Renal
c. Musculoskeletal d. Neurological

- *The most common organ system to manifest its complications in SLE is renal (lupus nephritis). Also, the most common cause of death in SLE patients is renal disease followed by infections and then by accelerated coronary artary disease.*
- *Grades of lupus nephritis:*
  I: minimal mesangial LN
  II: mesangial proliferative LN
  III: focal proliferative LN (< 50% of glomeruli involved)
  IV: diffuse proliferative LN (≥ 50% of glomeruli involved)
  V: membranous LN
  VI: advanced sclerotic LN
- *Most common and severe type of LN is diffuse proliferative.*
- *LN can present as nephritic or nephrotic syndrome.*

Ref: Davidson's Principles and Practice of Medicine 22nd Edition PN 500

88. An 8 years child comes with weakness of limbs. His X-ray shows splaying & cupping of metaphysis of long bones. Which of the following X-ray findings is he also very likely to have?

a. Expansion of costo-chondral junction
b. Increase in joint space
c. Peri-articular osteopenia
d. Decrease in bone density

- *The diagnosis in this 8 years old child is rickets.*
- *Rickets is a condition characterized by defective mineralization of cartilaginous growth plates: which occurs most commonly due to vitamin D deficiency.*
- *X-rays shows osteopenia and "Looser zones" (pseudofractures): It also shows widening of metaphyseal cupping/ splaying.*
- *Clinically, children have pathologic bow legs (gene varum), bead-like costochondral junctions (rachitic rosary) and craniotabes (soft skull).*
- *Lab features show: ↓ Vit D, ↓ Ca^{2+}, ↑ PTH, ↓ PO_4^{3-}, ↑ ALP*

Ref: Essential Pediatrics OP Ghai 8th edition PN 114

89. Which of the following biomarkers cannot be used to predict the cardiovascular disease risk in a patient?

a. Homocysteine b. LDH
c. Myoglobin d. Pro-NT-BNP

- *Accumulation of homocysteine in blood is a risk factor for arterial thrombus formation, hence it is a cardiovascular risk predictor.*
- *Myoglobin and LDH both are increased post MI, with levels being higher in severe coagulative necrosis.*
- *NT pro BNP is the biologically inactive from of BNP which is secreted by cardiomyocytes due to increased ventricular blood volume. Normal level of NT-pro-BNP helps to rule out chronic heart failure but elevated level of NT-Pro-BNP does not rule in the disease. So, it is not used as a cardiovascular risk factor.*

90. The tumor that is most commonly associated with osteoblastic secondaries in the skull is:

a. Prostatic carcinoma
b. Adrenal carcinoma
c. Breast carcinoma
d. Renal cell careinoma

- *Tumors associated with osteoblastic secondaries: prostate (leads to hypocalcemia), breast, uterus, ovary*
- *Tumors associated with osteolytic secondaries: kidneys (leads to hypercalcemia), lung, thyroid.*
  - *Most common malignancy of bone are secondary tumors.*
  - *Most common site for secondary tumor is the dorsal vestebrae.*
  - *Most common tumors for osteoblastic skull metastasis: breast > lung > prostate > lymphoma*

Ref: A textbook of Orthopedics Maheshwori 5th edition PN 247

Answer

76.d	5-6 RBC's / HPF	**77.a**	LV hypertrophy	**78.d**	4th week of life
79.c	Cavus-Adductus-...	**80.b**	Endonuclease	**81.d**	Arthritis
82.a	Cervix	**83.c**	Timely episiotomy as...	**84.a**	Supportive
85.b	Achondroplasia	**86.a**	moon shaped fibrin and ...	**87.b**	Renal
88.a	Expansion of costo-chondral..	**89.d**	Pro-NT-BNP	**90.c**	Breast carcinoma

91. Irreversible injury to which intracellular organelle is necessary to confer irreversible damage to a cell?

a. Nucleus b. Mitochondria
c. Golgi complex d. Endoplasmic reticulum

- *Though the reparative mechanism in a reversible cell injury is resynthesized in the Golgi apparatus and the rough endoplasmic reticulum, it is the mRNA signal from nucleus that activates these reparative mechanisms. Hence, an irreversible damage to the nucleus will result in a failure to activate these reparative responses thereby progressing the potentially reversible cellular injury to an inversible one.*

Ref: Robbins and Cotran pathologic basis of disease 8th edition PN 14

92. What percentage of total calories must be derived from fats?

a. 15-20% b. 20-35%
c. 35-50% d. 50-60%

- *The dietary composition should ideally be as follows:*
  - *Carbohydrates: 50-60%*
  - *Fat: 20-30%*

- Protein: 10-15%

93. The diagnosis of which disease requires the drawing of multiple blood samples from different sites

a. Infective Endocarditis
b. Acute rheumatic fever
c. Septicemia
d. Cholangitis

- To diagnose endocorditis, the blood culture must be performed from 3 separate sets of blood samples obtained from a separate venipuncture site; at 0,30 and 60 minutes for acute IE; and 0,12 and 24 hours for subacute IE.
- Duke's criteria → Infective Endocarditis
- Jones criteria → Acute Rheumatic fever
- SLEC criteria → Systemic Lupus Erythematosus
- Tokyo guidelines → Cholecystitis / Cholongitis
- SOFA Score → Sepsis

Ref: Esential Pediatrics OP Ghai 8th edition PN 444

94. Which change occurs in retina when it is exposed to light?

a. Conversion of all-trans-retinal to cis-retinal
b. Conversion of retinal to retinol
c. Conversion of retinol to retinal
d. Conversion of cis-retinal to all-trans-retinal

- When light energy falls on rhodopsin, 11-cis-retinal gets isomerized into trans-retinal. This process, after a series of intermediates, activates a protein called transducin which activates phosphadiesterase enzyme.
- Receptor potential in eye is hyperpolarizing, not depolarizing.
- Rod cells are long and slender: Cones are small and conical.
- Color blindness is inherited as an X-linked recessive character.

Ref: BRS Physiology 6th edition PN 41

95. Providing education to school going children about personal hygiene is an example of:

a. Specific protection b. health promotion
c. Secondary prevention d. Tertiary prevention

Levels of prevention:

1. ***Primordial prevention:*** *Preventing the emergence of risk factors.*
   Best level of prevention for non-communicable diseases.
2. ***Primary prevention:*** *Action taken prior to onset of disease but after the risk factors have emerged.*
3. ***Secondary prevention:*** *Action taken after the disease has occurred. It aims to halt the progress of disease at its incipient stage.*
4. ***Tertiary prevention:*** *It is applied when disease has advenced beyond the early stage. Its primary aim is to reduce or limit disabilities.*

- Besides these specific protection are those that aim to prevent a specific disease and not all the diseases at a whole. eg. condoms for HIV.
- Health promotion measures are those that aim to improve the general status of health of the community eg. awareness on menstrual hygiene.

96. Which is the most common site for plexiform neurofibromatosis?

a. facial nerve b. trigeminal nerve
c. peripheral nerve d. optic nerve

- Neurofibroma is a benign tumor of nerve-sheath in the peripheral nervous system. It is of 2 major types: Dermal and Plexiform.
- Plexiform neurofibroma is an uncommon variant of peripheral nerves which arises from a proliferation of all neural elements.
- It has irregularly thickened; disforted and tortuous structure.
- Most common presentation of Neurofibromatosis type 2 is bilateral aeoustic schwannomas.
- Most common presentation of Neurofibromatosis type 1 is with cafe-au-lait spots and cutaneous neurofibromas.

Ref: Bedside Clinics in Surgery Makhan Laal 2nd edition PN 387

97. Maximum concentration of cone cells is found in:

a. Fovea centralis b. Macula lutea
c. Blind Spot d. none of the above

- The macula is an oval-pigmented area near the center of retina. It is antomically composed of 2 or more layers of ganglion cells. It is yellow in color and thus, absorbs excess blue and ultraviolet light that enter the eye, acting as a natural sunblock. It has 4 zones: fovea, foveal avasacular zone, foveola and umbo.
- The fovea centralis is a small pit, the photoreceptor layer of which has entirely cones and which is specialized for maximum visual acuity. Within the fovea is a central zone called foveal avascular zone which does not allow the loss or dispersion of light to occur. It is the only area in retina where 20/20 vision is attainable, and is the area where fine detail and colourcan be distinguished.
- Blind spot is a point in the visual field that corresponds to the lack of light-detecting photoreceptor cells on the optic disc of the retina where the optic nerve passes thorugh the optic disc.

Ref: Parson's disease of the eye 21st edition PN 12

98. A ligand having affinity to a receptor but no intrinsic activity at the receptor is correctly known as:

a. agonist b. Partial agonist
c. antagonist d. none of the above

- Has affinity to receptor but no intrinsic activity →

antagonist.

- Has affinity to receptor with suboptimal intrinsic activity → Partial agonist.
- Has affinity to receptor with full intrinsic actiivty → full agonist.

Ref: First Aid 2018 PN 230

99. Which is the ideal contraceptive for a newly married couple?

a. Condoms
b. Combined OCP's
c. IUD's
d. Depo-provera injection

- In a newly married couple. COCP's are the ideal contraceptive measures because of easiness in use, early return to fertility when desired and short duration of action. Besides, if the female is having any form of dysmenorrhea or dysfunctional uterine bleeding. COCP's help to regularize than as well.
- Condoms are not the contraceptive of choice as they are needed to be used on an everyday basis.
- Intrauterine devices are not preferred as they are generally intended to be kept for longer duration like 7-10 years. However, a nulliparous female is more likely to experience complicationswithIUDS than a multiparous female.
- Injection depo-provera is a good choice as it should be applied every 3 months. However, delay return to fertility and depo-amenorrhea are chief complications that may arise and so this is not the ideal contraceptives of choice.

Ref: DC Dutta textbook of Obstetrics 8th edition PN 630

100. Which is not an advantage of combination of levodopa with carbidopa?

a. reduces the required dase of levodopa
b. reduces the incidence of "on-off phenomenon"
c. reduces the extrapyromidal side effects
d. reduces the effect of dopamine on heart

- Levodopa is the precussor of dopamine which is converted to dopamine by the enzyme dopa decarboxylase in the CNS and in the peripheral blood as well carbidopa is the inhibitor of the enzyme dopa decarboxylase which itself does not enter into the CNS.
- Henceforth, it decreases the peripheral conversion of levodopa into dopamine thereby decreasing the level of dopamine in peripheral blood. Thus, lesser dose of levodopa is required to produce same concentration of dopamine in the CNS. Also, the effect of dopamine on heart (which is due to peripheral dopamine) is minimised. Similarly, the extrapyramidal side effects are reduced. On-off phenomenon are due to central actions of dopamine which is totally unaffected by the presence or absence of carbidopa.

Ref: Davidson's Principles and Practice of Medicine 22nd Edition PN 1196

101. Which is a contraindication of medical abortion using mifepristone & misoprostol?

a. Controlled bronchial asthma
b. Allergy to these drugs
c. STD'S like HIV/AIDS
d. Pregnancy of 7 weeks POG

- Misoprostol, being a prostaglandin, may sometimes exacerbate and lead to acute attacks of bronchial asthma. However, controlled bronchial asthma is not a contraindication to medical termination of pregnancy.
- Pregnancy of 12 weeks POG is preferably terminated by medical abortion.

Ref: DC Dutta textbook of Obstetrics 8th edition PN 579

102. A Laryngeal Mask Airway:

a. ensures an unobstructed airway
b. can be used in full-stomach patients
c. is not associated with laryngospasm
d. can be used in positive pressure ventilation

- As laryngeal mask airway is placed close to the base of tongue and over the laryngeal inlet, it does not effectively seal or separate the pharyngeal inlet from laryngeal inlet. Henceforth, chances of aspiration exist with LMA and so, it cannot be used in full-stomach patients.
- Also, using PPV with LMA will increase air volume and pressure in the alimentary canal thereby increasing the probability of aspiration.
- LMA, when placed in appropriate position, will prevent the backfall of tongue and thereby, ensure an unobstructed airway.

Ref: Short textbook of Anesthesia, Ajay Yadav, 5th edition PN 42

103. A 45 years female comes with thecomplains of progressive SOB & dry cough for the last 6 months. On examination, she has clubbing, central cyanosis and pedal edema. On chest examination, she has bilateral basal crackles & loud P_2. What is the most common cause of mortality in these patients?

a. Type II resp. failure
b. Pulmonary arterial HTN
c. Hypoxia
d. Anemia

- Progressive SOB and dry Cough, Cyanosis, Clubbing and Crackles (4C) in a middle aged woman suggest a diagnosis of interstitial lung disease.
- The most common cause of mortality in Interstitial Lung diseases patients is Pulmonary Arterial Hypertension.
- Presence of Loud P_2 is a sign that PAH is developing in this patient.
- Pulmonary hypertension is said to be present if the mean pulmonary artery pressure (Normal = 10 - 14 mm Hg) is more than 25 mm Hg. It cause severe respiratory distress → cyanosis and RVH → decompensated corpulmonale.

Ref: Davidson's Principles and Practice of Medicine 22nd Edtion PN 709

104. At what time after birth does foramen ovale close?

a. immediately b. 1-2 days
c. 1-2 weeks d. 1-2 months

- *At birth, as the lungs start functioning, the increase in O_2 concentration decreases the pulmonary vascular pressure and the left atrial pressure becomes higher than that of the right. This forces the septum primum against the septum secundum and thus, foramen ovale is closed functionally. Later on, anatomical closure occurs and leaves the remnant of the foramen ovale, the fossa ovalis.*
- *Time of anatomical closure:*
  1. *Umbilical vessels and ductus venosus → 2-3 months*
  2. *Ductus arteriosus → 1-3 months*
  3. *Foramen ovale → 6 months*

Ref: Langmann's Medical Embryology 12th edition PN 197

105. How many layers are there in tear film?

a. 2 b. 3
c. 4 d. 5

- *There are 3 layers in the tear film:*
  - *a. Mucus layer*
  - *b. Aqueous layer*
  - *c. Lipid layer*
- ***a. Mucus layer:** It is the innermost layer that consists of mucin secreted by conjunctival goblet cells. It converts the hydrophobic corneal surface to a hydrophilic one.*
- ***b. Aqueous layer:** It forms the bulk of the tear film which consists of the tears secreted by main & accessory lacrimal glands.*
- ***c. Lipid (Oily) layer:** It is the outermost thinnest layer formed at the air-tear interface from the secretions of Meibomian, Zeis and Moll glands. It presents the overflow of tears, retards their evaporation and lubricates the eyelids.*

Ref: Parson's disease of the eye 21st edition PN 462

Answer

91.a	Nucleus	**92.b**	20-35%	**93.a**	Infective endocarditis
94.d	Conversion of cis-retinal to ...	**95.b**	Health Promotion	**96.c**	Peripheral nerve
97.a	Fovea centralis	**98.c**	Antagonist	**99.b**	Combined OCP's
100.b	Reduces the incidence of ...	**101.b**	Allergy to these drugs	**102.a**	Ensures an unobstructed ...
103.b	Pulmonary arterial ...	**104.a**	Immediately	**105.b**	3

106. Which type of cutaneous tuberculosis is paucibacillary?

a. Lupus vulgaris
b. Scrofuloderma
c. Tuberculous chancre
d. tuberculosis periorificialis

Classification of cutaneous tuberculosis:

- ***a. Multibacillary:***
  - *Primary inoculation TB*
  - *Scrofuloderma*
  - *Tuberculosis periorificialis*
  - *Acute miliary tuberculosis*
  - *Gumma*
- ***b. Paucibacillary:***
  - *Tuberculosis verrucosa cutis*
  - *Lupus vulgaris*

Lupus vulgaris

- *Most common tubercular skin infection*
- *Nodular appearance, mostly on face and neck*
- *Histology shows well formed dermal granuloma with necrotic centers.*
- *As it is associated with moderate to high immunity, tuberculin test is positive.*

Ref: https://www.researchgate.net/figure/Classification-of-cutaneous-tuberculosis_tbl1_314168540

107. 100 mg of lignocaine is present in:

a. 100 ml of 1% solution b. 20% of 5% solution
c. 50 ml of 2% solution d. 10 ml of 1% solution

- *10ml of 1% solution*

  $= 10 \times \frac{1}{100} gm = 0.1\ gm = 100\ mg$

- *Restsofthe options give 1 gm as the weight of lignocaine.*

108. Which of the following muscles is not supplied by facial nerve?

a. Temporalis b. Zygomatic
c. Cervical d. LPS

- *Muscles of facial expression are supplied by the facial nerve.*
- *Muscles supplied by facial nerve:*
  - *Within facial canal:*
    - *Greater petrosal nerve*
    - *Nerve to stapedius*
    - *Chorda tympani nerve*
  - *At its exit from stylomastoid foramen:*
    - *Posterior auricular nerve*
    - *Digastric nerve*
    - *Stylohyoid nerve*
  - *Terminal branches:*
    - *Temporal nerve*
    - *Zygomatic nerve*
    - *Buccal nerve (Upper buccal and lower buccal)*
    - *Mandibular nerve*
    - *Cervical nerve*
- *Levatorpalpebraesuperioris is supplied by CN III (Occulomotor nerve)*

Ref: Bedside Clinics in Medicine, Kundu, 7th edition PN 496

109. Who is given the drug to be tested in phase II of clinical trial?

a. Small number of patients
b. Large number of patients

c. Healthy volunteers
d. Patients & animals

Phase	Tested upon	What is studied?
0	Non-human	does it have any effect?
I	healthy volunteers	is it safe?
II	Small number of pts	how well does it work?
III	large number of pts	if the treatment is better than standard treatment
IV	post-marketing surveillance	

110. Who gave the concept of id, ego & superego?

a. Sigmund Freud b. B. F. Skinner
c. Jean Piaget d. Leon Freud

- Id, ego and superego are the 3 interacting agents in the structural model of psyche as given by Sigmund Freud.
- Id = unco-ordinated instinct.
  (eg. feeling like "I want it now, any how")
- Super-ego = Moralizing and critically appraising reality
  (eg. feeling like "you can't have it/ It's not right")
- Ego=Organized, realistic part that mediates between the desires of the id & super ego.
  (eg. feeling like "I need to do a bit of planning to get it")
- Freud is also the author of "Interpretation of Dreams".

Ref: AShort textbook of Psychiatry Ahuja 7th edition PN 206

111. Which is the commonly used bedside test for snake envenomation?

a. activated partial thromboplastin time
b. prothrombin time
c. bleeding time
d. 20 minutes whole blood clotting test

- This test is done to assess the presence or absence of any coagulopathy after snake envenomation.
- 2 ml of venous blood is taken into a clean and dry glass tube: and is maintained upright, open and undisturbed for 20 minutes.
- After 20 minutes, the tube is inverted.
- If a solid clot is present and retained, it indicates normal coagulation.
- If the clot breaks down or if there is no clot, it indicates a consumption coagulopathy due to envenomation and anti-snake venom is to be administered.
- Other options given are not bedside tests but are laboratory investigations.

Ref:https://academic.oup.com/qjmed/article/106/10/925/1587782

112. A 30 years male presented with right sided headache which was periodic, reaching its peak and lasting for about 1 hour. The patient describes the pain as severe and was disturbing his work performance. What is your diagnosis?

a. Migraine b. cluster headache
c. Tension headache d. Meningitis

- Cluster headache is lateralized headache, most common at the age of 30-50 years with male preponderance. No hereditary factors are present. It begins without warning and reaches crescendo within 5 minutes. It is described as excruciating, deep, explosive type of pain that awakens the patients from sleep.
- Migraine headache are also lateralized frontotemporal headaches with female preponderance and positive family history. Pain is often proceded by aura, and lasts for several hours. It is usually throbbing type of headache. The onset is after awakening and relieved after sleep.
- Headache in meningitis is associated with fever, photophobia and toxic features.
- Tension headache: Constant pressure, bilateral, non-pulsating, not aggravated by physical activity, no nausea or vomiting, gets worse as the day passes.
- **Types of pain:**
  - Sinusitis: Pain is behind browbone or cheekbones
  - Cluster: Pain is around one eye
  - Tension: Painb like a band squeezing the head
  - Migraine: Pain, nausea and visual changes

Ref: Davidson's Principles and Practice of Medicine 22nd Edition PN 1177

113. Anti doublestranded DNA is highly specific for:

a. Systemic sclerosis b. SLE
c. Polymyositis d. Rheumatoid arthritis

- Anti dsDNA and anti Smith antibodies are specific for SLE.
- Anti histone antibodies: drug induced lupus
- Anti DNA topoisomerase B (scl-70) → systemic sclerosis
- Anti centromeric antibody → CREST syndrome
- Anti mitochondrial antibody → Primary biliary cirrhosis

Ref: Essential Pediatrics OP Ghai 8th edition PN 629

114. Commonest cause of death in peptic ulcer patients is:

a. Perforation b. Hemorrhage
c. Pyloric stenosis d. Malignancy

- Most common cause of death in peptic ulcer disease: bleeding
- Most common indication for surgery in peptic ulcer disease→ bleeding
- Most common source of bleeding → gastroduodenal artery
- Most common complication of peptic ulcer → bleeding
- Most common complication of gastric ulcer → Perforation

Ref: Bedside Clinics in Surgery Makhan Laal 2nd edition PN 119

115. Blighted ovum (silent miscarriage) is a sonographic finding in:

a. missed abortion b. threatened abortion
c. inevitable abortion d. completed abortion

Blighted ovum

- seen in USG
- Said to be present if gestational sac of ≥ 3 cm has no fetal

EASY SAMIKSHA

pce in it.

Ref: D. Dutta Textbook of Obstetrics PN 188

116. What is the dose of zinc in a 12 month old child suffeing from diarrhea?

a. 1 mg/10-14 days b. 10 mg/10-14 days
c. 15mg/10-14 days d. 20 mg/10-14 days

Dose of zinc is:

- *2-6 months: 10 mg/day × 10-14 days*
- *≥ 6months: 20 mg/day × 10-14 days*

Ref: Esential Pediatrics OP Ghai 8th edition PN 295

117. Pseudo-dementia is seen in:

a. Alcoholism b. Depression
c. Schizophrenia d. Mania

- *Pseudodementia → depression*
- *Hysterical pseudodementia (Ganser's syndrome) seen in prion inmates, characterized by approximate answer or vorbeireden.*

Ref: A Short textbook of Psychiatry Ahuja 7th edition PN 23

118. In lepromin test, the Fernandez reaction is read after:

a. 48 hours b. 72 hours
c. 24 hours d. 4 weeks

- ***Lepromin test:***

Intradermal injection of lepromin
↓
elicits 2 types of reactions

i. *Early: Tuberculin-like reaction known as Fernandez reaction in 48 hours*
ii. *Late:*
Popular reaction known as Mitsuda reaction in 3-4 weeks.
Late reaction is positive in tuberculoid leprosy and negative in lepromatous leprosy.

Ref: https://en.wikipedia.org/wiki/Fernandez_reaction

119. The superior oblique muscle is supplied by:

a. CN III b. CN IV
c. CN V d. CN VI

- *@ LR6SO4 rest 3, i.e. Lateral Rectus → CN VI*
- *Superior Oblique → CN IV*
- *Rest of the extra ocular muscles → CN III*
- *Also supplies LevatorPalpabraesuperioris muscle*

Ref: Bedside Clinics in Medicine, Kundu, 7th edition PN 487

120. CVP is measured &recorded to know:

a. Right atrial pressure
b. Left ventricular pressure
c. Left atrial pressure
d. Right ventricular pressure

- *Central venous pressure → RA pressure*
- *Pulmonary capillary wedge pressure → LA pressure*

Ref: Bedside Clinics in Medicine, Kundu, 7th edition PN 371

Answer

106.a	Lupus vulgaris	**107.d**	10ml of 1% solution	**108.d**	LPS
109.a	Small number of patients	**110.a**	Sigmund Freud	**111.a**	20 minutes whole blood...
112.b	Cluster headache	**113.b**	SLE	**114.b**	Hemorrhage
115.a	Missed abortion	**116.d**	20 mg/10-14 days	**117.b**	Depression
118.a	48 hours	**119.b**	CN IV	**120.a**	Right atrial pressure

121. Which is cyanotic heart disease?

a. ASD b. VSD
c. TOF d. PDA

Explanation

- ***Classification of Congenital Heart Disease***
  - *Left to Right shunts (Acyanotic): ASD, VSD,PDA*
  - *Right to Left Shunts(Cyanotic):Tetralogy of Fallot, transposition of great vessels, Tricuspid valve atresia, TAPVC, Persistent Truncus arteries, Ebstein anomaly.*
  - *Obstructive lesions:Coarctation of Aorta, Aortic stenosis, Pulmonary stenosis*

Ref: Cardiology and Critical Care by Prof. Dr.ArunSayami, page no. 149

122. An ampoule of adrenaline 1: 1000 means

a. 1 mg/ml b. 0.1 mg/ml
c. 10mcg/ml d. 1mg/ml

Explanation

- ***Qualitative and Quantitative composition:***
  Each 1 ml contains 1 mg adrenaline as adrenaline acid tartarate.

Ref:https://www.medicines.org.uk/emc/product/3673/smpc

123. Volume of urine for oliguria is-

a. <100 ml in 24 hours
b. <300 ml in 24 hours
c. <500 ml in 24 hours
d. <800 ml in 24 hours

Explanation

- *Oliguria is defined as being present when less than 300ml urine is passed per day.*
  Anuria is deemed to exist when less than 50 ml of urine is passed per day.
  Polyuria is defined as a urine volume in excess of 3L/day.

Ref: Davidson's Principle and practice of Medicine22nd edition, page no. 471,472

124. All the following are features of Anorexia Nervosa except-

a. Predominantly seen in females
b. There is loss of weight at the time of presentation
c. Amenorrhea is rare.
d. There is avoidance of high calorie diet.

Explanation:

- *Anorexia nervosa is an eating disorder characterized by the following prominent clinical features:*
  1. *It occurs much more often in females as compared to male.*

2. There is intense fear of becoming obese.
3. Significant weight loss occurs.
4. There is often a body image disturbance.
5. No known medical illness.
6. Absence of any other primary psychiatric disorders.
7. Amenorrhea,primary or secondary, is often present in females.

Ref: Ahuja A Short Textbook of Psychiatry, 7th edition, page no. 142

125. Sterilization means

a. Killing the microorganisms as well as their spores.
b. Killing the microorganisms
c. Boiling milk at 63 degree Celsius
d. Get rid of possible microorganisms from the surface

Explanation:

- *Sterilization is a process by means of which an article, surface or medium is made free from all living microorganisms including spores.*
- *Disinfection is a process of destruction of vegetative form of pathogenic organisms which are capable of producing infection but necessarily resistant spores.*

Ref: Textbook of Microbiology by P. Chakraborty Page no. 34

126. A non painful cyst in vaginal wall at the junction of middle and lower one third-

a. Gartner cyst
b. Bartholin's cyst
c. Nabothian cyst
d. Herculean cyst

Explanation:

Features of Gartner's cyst:

- *The Gartner's cyst is usually situated in the anterolateral wall of vagina.*
- *The epithelium is low columnar and secrete mucinous material.*
- *Rugosities of the overlying vaginal mucosa are lost.*
- *Vaginal mucosa over it becomes tense and shiny.*
- *Margins are well defined.*
- *It is not reducible.*
- *There is no impulse on coughing.*
- *The treatment is by surgical excision.*

Ref: DC Dutta's Textbook of Obstetrics 8th edition, page no.505, 869

127. A man of 32 years has presented with fever , jaundice and right hypochondrium pain, the mostlikely diagnosis is-

a. Acute cholecystitis b. Acute cholangitis
c. Acute hepatitis d. Choledocholithiasis

Explanation

Charcot's triad of ascending cholangitis

- *Intermittent pain(may be colicky)*
- *Intermittent fever*
- *Intermittent jaundice*

Ref: SRB'S Manual of Surgery by Sriram Bhat M, 4th edition, page no. 691

128.1 gm of hemoglobin carries how much oxygen:

a. 1.34ml b. 1.6 ml
c. 3.34ml d. 33ml

Explanation:

- *The blood of normal person contains about 15 gm of hemoglobin in each 100 milliliters of blood, and each gram of hemoglobin can bind with a maximum of 1.34 milliliters of oxygen. Therefore, 15 times 1.34 equals 20.1, which means that, on average, the 15 gms of Hb in 100ml of blood can combine with a total of about 20 ml of oxygen if the Hb is 100% saturated. This is usually expressed as 20 volume percent.*

Ref: First Aid for the USMLE step 1, 2018, page no. 649

129. Which drug doesn't pass through placenta-

a. Warfarin b. Heparin
c. Atropine d. Morphine

Explanation:

- *Heparin is large, highly ionized molecule;therefore not absorbed orally. Injected i.v. it acts instantaneously,but after s.c injection anticoagulant effect develops after around 60 mins. Bioavailability of s.c heparin is inconsistent. Heparin doesnot cross the blood brain barrier or placenta. Thus, it is the anticoagulant of choice during pregnancy. It is metabolized in liver by heparinase and fragments are excreted in urine.*

Ref: KD Tripathi -Essentials of Medical Pharmacology,6th edition, page no. 598

130. Isoflurane is excreted through-

a. Kidneys b. Lungs
c. Liver d. Bile

Explanation:

- *Inhaled Isoflurane is almost 100% excreted through lungs and only about 0.2% can be recovered as urinary metabolites. The likelihood of renal or hepatic toxicity of isoflurane anesthesia is considered to be minimal.*

Ref: Lee's Synopsis of Anesthesia,13th edition page no. 133-135

Answer

121.c	TOF	**122.a**	1 mg/ml	**123.b**	<300 ml in 24 hours
124.c	Amenorrhea is rare.	**125.a**	Killing the microorganism...	**126.a**	Gartner cyst
227.b	Acute cholangitis	**128.a**	1.34ml	**129.a**	Warfarin
130.b	Lungs				

TRY SAMPLE

A child is brought by his mother with complaints of swelling around eyelids along with reduced urine output for 7 days.

131. Which investigation will you do as initial assessment?

a. 24hrurinary protein
b. Urine RE/ME
c. ECG
d. Urine acetone

➲ *Disease — Initial investigation*

Nephrotic syndrome	24 hr urinary protein
Nephritic syndrome	Urine RE/ME
MI	ECG
Pneumonia, bronchiolitis	X-ray
Wilm's tumor	USG abdomen

Ref: Ghai Essential Paediatrics 8th edition, Page no.478

132. What is the most likely diagnosis?

a. Nephrotic syndrome
b. Nephritic syndrome
c. Congestive Cardiac failure
d. Liver failure

➲ *Nephrotic syndrome:- Proteinuria > 3.5 gm/day, hypoalbuminemia, edema, hyperlipidemia.*

Note: Periorbital swelling is the key point in nephrotic syndrome.

➲ *Nephritic syndrome:- Hematuria, HTN, edema and oliguria are features of nephritic syndrome.*

Ref: Ghai Essential Paediatrics 8th edition, Page no.477

➲ *Progression of swelling: (in general):*
a. Renal origin → start from face
b. Cardiac origin: start from feet
c. Hepatic orgin (liver): Start from abdomen

133. On examination, his BP is 110/70mmHg. Total cholesterol is increased and serum albumin is decreased. What will be the management option of the above condition?

a. Oral prednisolone
b. NSAIDs
c. Diuretics
d. Cyclophosphamide

➲ *Prednisolone in nephrotic syndrome:*
2 mg/kg/day (max. 60 mg) single or divide dose for 6 wks
↓
1.5 mg/kg (max. 50 mg) single morning dose on alternate day for next 6 weeks.

Ref: Ghai Essential Paediatrics8thedition,Page no.479

134. The child also has ascitis. How will you treat the condition?

a. furosemide + spironolactone
b. furosemide with albumin
c. furosemide
d. As Therapeutic ascitic tapping

➲ *Furosemide - 4mg/kg/day in 2 divided dose alone or with aldosterone antagonist, spironolactone (2 - 3 mg/kg/day in 2 divided doses) → for management of edema.*

Ref: Ghai Essential Paediatrics 8thedition, Page no.480

Role of spironolactone:

➲ *Nephrotic syndrome→ decreased renal perfusion → activation of RAAS pathway → ↑ed aldosterone → ↑ed Na^+ & H_2O retention.*
So; Spironolactone, an aldosterone antagonist is used.

135. What will be the indication of renal biopsy in this patient?

a. > 3 relapses in a year
b. less than 1 year
c. High C_3 serum level
d. Hypotension

➲ *Indication of Renal biopsy:*
1. *Age < 1 year > 8 year*
2. *Hypertension*
3. *Raised serum creatinine*
4. *Low C_3 serum level*
5. *Persistent microscopic or gross hematuria*
6. *No response to 6 wks daily divided dose of steroid therapy.*

Ref: Nelson Textbook of Paediatrics, 19th edition, page no. 1804

Answer

131.a	24 hrurinary protein	132.a	Nephrotic syndrome	133.a	Oral prednisolone
134.a	furosemide + spironolactone	135.b	less than 1 year		

A 45 yrs male is rushed to ER with severe chest pain radiating towards left upper limb, Q waves in ECG with sweating & palpitation. He is diagnosed to have inferior wall MI.

136. Which of the following is not the criteria fordiagnosis of above condition?

a. Typical history and examination finding
b. Characteristic ECG changes
c. Rise in cardiac markets
d. Presence of risk factors.

➲ *WHO crieria for diagnosing MI include all 3 options except option D. (2 out of 3 criteria should be fullfilled for the diagnosis).*

Ref: Cardiology and Critical Care by Prof. Dr.Arun Sayami

137. Which of the following enzyme will rise early in MI?

a. Troponin I
b. LDH
c. CPK-MB
d. ALP.

➲ *Cardiac markers:-*

Markers	Detectable at	Remains upto
Myoglobin	30 min	-
Troponin	3-4 hrs	10 days
CKMB	3-4 hrs	3-4 days

Ref: Cardiology and Critical Care by Prof.Dr.ArunSayami Page no. 56

138. Identify the correct ECG changes?

a. ST elevation → Tall T wave → pathological Q wave.
b. Tall T wave → Q wave → ST elevation
c. Pathological Q wave → ST elevation → Tall T wave.
d. ST Elevation → Q wave → Tall T wave.

➲ *Pattern ECG changes in MI:*
Hyperacute T wave → ST segment elevation → T wave inversion → pathological Q waves (Usually after 6-12 hrs).

Ref-Cardiology and Critical Care by Prof.Dr.ArunSayami Page no. 61

139. One of them is relative contraindication for using streptokinase.

a. Active internal bleeding
b. Stroke within 3 month
c. Pregnancy
d. H/o cholecystectomy 7 months back.

➲ *Contraindications of streptokinase (fibrinolytic agents)*

Absolute	Relative
- Neurological: (IC hemorrhage, IC neoplasm, IC surgery, structural vascular lesion, trauma →, stroke within 3 month)	- Neurological: IC pathology not covered in absolute CI, Stroke of > 3 month.
- Cardiac (HTN, aortic dissection) - Hematological: active bleeding	Others: - Pregnancy - Peptic ulcer - Surgery < 3 month - Recent bleeding

Ref: Cardiology and Critical Care by Prof.Dr.ArunSayami Page no. 9

140. Which drug help in cardiac remodelling?

a. Aspirin
b. Enalapril
c. Statins
d. Clopidogrel

➲ *ACE inhibitors:-*
- *Used in MI as it help in cardiac remodeling*
- *Used in it diabetic nephropathy as it control proteinuria.*
- *C/I in pregnancy due to teratogenecity*
- *Cough is common side effect (due to ↑ed level of bradykinin).*

Ref: Cardiology and Critical Care by Prof.Dr.ArunSayami Page no. 12

Answer

136.d	Presence of risk factors.	**137.a**	Troponin I	**138.a**	ST elevation → Tall T wave..
139.c	Pregnancy	**140.b**	Enalapril		

A female at 37 weeks POG came with BP of 170/100, seizure and pedal edema.

141. What is the probable diagnosis?

a. Pre eclampsia
b. Eclampsia
c. GHTN
d. Epilepsy

Explanation:

➲ *Gestational HTN: BP ≥ 140/90mmHg for 1st time in pregnancy after 20 wks without proteinuria.*
➲ *Preeclampsia → Gestational HTN with proteinuria*
➲ *Eclampsia: Pre eclampsia + Convulsion/coma*
➲ *Chronic HTN → known HTN before pregnancy or HTN diagnosed 1st time before 20 wks of pregnancy*

Ref:DC Dutta's Textbook of Obstetrics, 9th edition, page no 207

142. What is the immediate management?

a. $MgSO_4$
b. Diazepam
c. Carbamazepine
d. Phenytoin

Regimens:

➲ *Pritchard (i.m.):-*

Loading dose	Maintenance dose
4 gm (20% solution) i.v over 5 min followed by 10 gm (50% solution) i.m, 5gm in each buttock.	5 gm (50% solution) i.m in alternate buttock 4 hrly.

➲ *Zuspan (i.v)*

Ref: DC Dutta's Textbook of Obstetrics, 9th edition, page no 221

143. Which of the following organ is not affected by the above condition?

a. Liver
b. Skeletal muscle
c. Eye
d. Kidney

Ref: DC Dutta's Textbook of Obstetrics, 9th edition, page no 219

144. NOT a complication of it.

a. Injuries
b. IUGR
c. infection
d. Hyperpyrexia

➲ *Complications:*

Maternal	Fetal
Injurie	Prematurity
Pul rnoary complications (ed em. pneumonia)	Intrauterine asphyxia (IUGR).
Hyp erpyrexia	
Car dia (left ventricular failure)	
Ren l failure	
Hep ati (necrosis, subcapsular hem atma)	
Cer ebrl (edema)	
Dis ur ed vision	

Ref: DC Dutta's Textbook of Obstetrics, 9th edition, page no 220

145. Pregnancy is:

a. Terminated after the patient is stabilized.
b. Terminated immediately
c. Do not depend on above mentioned condition
d. Continued

Initial resolution of seizures, patient stable → Obstetric management.

Ref: DC Dutta's Textbook of Obstetrics, 9th edition, page no 223

Answer

141.b	Eclampsia	**142.a**	$MgSO_4$	**143.b**	Skeletal muscle
144.c	infecton	**145.a**	Terminated after the patient is stabilized		

51 year old school teacher visited Gynae OPD with chief complaint of bleeding PV for 5 days. Examination shows normal uterus with normal USG finding.

146. What could be the most common cause of above condition?

a. Senile vaginitis
b. Endometrial Ca
c. Cervical Ca
d. Fiborid Uterus

Explanation:

➲ *Post menopausal women with PV bleeding → Endometrial Ca unless proven otherwise.*
Post coital bleeding → suggestive of cervical Ca.

Ref: DC Dutta's Textbook of Gynaecology, 6th edition, page no. 356

147. What will be the best management option?

a. Endometrial biopsy
b. Hysteroscopy
c. Hysteroscopy guided EB
d. USG

Ref: DC Dutta's Textbook of Gynaecology, 6th edition, page no. 356

148. Which of the following is the histological finding of above condition?

a. Atroptic endometrium
b. Simple cystic hyperplasia
c. Complex adenomatous hyperplasia with atypia
d. Complex adenomatous hyperplasia without atypia

Ref: DC Dutta's Textbook of Gynaecology, 6th edition, page no. 329

Type of hyperplasia	Progression to cancer
Simple(cystic without atypia)	1
Complex (adenomatous without atypia)	3
Simple (cystic with atypia)	8
Complex (adenomatous with atypia)	29

149. How do you manage complex adenomatous atypia?

a. Endometrial ablation
b. Hysterectomy
c. Hysterotomy
d. Radiotherapy

Natural history	Treatment
Simple hyperplasia, no atypia	Progestin
Complex hyperplasia, no atypia	Progestin
Complex hyperplasia with atypia	Hysterectomy or progestin
Endometrial Ca	TAH BSO

Ref: Kaplan USMLE step 2 CK lecture notes ,Gynae and Obs

150. Which of the following is its risk factor?

a. Obesity, HTN and DM
b. Hyperthyroidism
c. Liver failure
d. Renal failure

➲ *Risk factors of endometrial Ca:*
Obesity, HTN, DM, nulliparity, late menopause & chronic anovulatary conditions like PCOS.

Ref: DC Dutta's Textbook of Gynaecology, 6thedition, page no. 358

➲ *Ideal time for Endometrial biopsy: Day 24-26 → Secretory endometrium (confirming ovulation)*

Note:Ideal time for cervical mucus study-D_{12-14}, Pap smear → immediately after menstruation D_4-D_{12}.

Answer

146.b	Endometrial Ca	**147.c**	Hysteroscopy guide EB	**148.c**	Complex adenomatous...
149.b	Hysterectomy	**150.a**	Obesity,HTN and DM		

A 15 yrs old boy complains of swelling over the distal thigh which is progressively increasing and dull aching. There is no h/o trauma or fever. Superficial veins are prominent and there is slight raise in local

NMCLE - 2075 SHRAWAN

1. **All of the following are classified as true support of uterus except:**
   a. Transcervical Ligament
   b. Pubocervical Ligament
   c. Uterosacral Ligament
   d. Broad Ligament

PPV
Puru

➲ *Primary Support of Uterus are the muscular or active support and Fibromuscular or mechanical support. Muscular support or active support are pelvic diaphragm (levator ani), perineal body, urogenital diaphragm (deep transverse perinei). Fibromuscular support or mechanical support are Uterine Axis, Pubocervical ligament, transverse cervical ligament, uterosacral ligament and round ligament of uterus.*
➲ *Secondary or false support are broad ligament of uterus, uterovesical fold of peritoneum and rectovaginal folds of peritoneum.*

2. **Which of the following is NOT essential fatty acid?**
   a. Linoleic Acid b. Linolenic Acid
   c. Arachidonic Acid d. Oleic Acid

➲ *The fatty acids that cannot by synthesized by the body and therefore should be supplied through the diet are referred to as essential fatty acids (EFA). Linoleic acid and Linolenic Acid are essential. Some workers regard Arachidonic Acid also as an EFA although it can be synthesized from Linoleic Acid. Deficiency of essential fatty acid causes scaly dermatitis, poor wound healing, hair loss, etc.*

3. **Endoscope is sterilized by:**
   a. Glutaraldehyde b. Formaldehyde
   c. Autoclaving d. Hot Air Oven

Various Method of Sterilisation	
Material	**Method of Sterilisation**
Thermometer	Isopropyl Alcohol
Glass syringe, Flask	Hot Air Oven
OT, Ward, Lab fumigation	Formaldehyde > UV > BPL (Beta Propiolactone)
Cystoscope, Bronchoscope, Colonoscope, UGI Endoscope	**Orthophthaldehyde> 2% Glutaraldehyde (Cidex)**
Heart lung machine, Respiratory, Dental Equipments	Ethylene oxide
Vaccine, sera, antibiotics, body fluid	Filtration
Sharp Instruments	Cresol
Milk	Pasteurisation
Plastic syringe, Catgut Suture, Swab, Catheter, Grafts	Ionising Radiation
Culture media, All instruments except sharp and glass, all suture materials except catgut	Autoclave
Metallic inoculation wire	Red heat by Bunsen Burner
Soiled dressing, bedding, animal carcasses	Burning (Incineration)
Metallic Surgical Instruments	Autoclave. Hot air Oven, infra red radiation

4. **Suspended Animation may be seen with:**
   a. Electrocution b. Strangulation / Hanging
   c. Drowning d. Burn

➲ *Suspended animation or Apparent death is a condition in which signs of life are not found as the functions are interrupted for some time, or are reduced to a minimum. However, life continues and resuscitation is successful in such cases.*
➲ *This condition lasts from a few seconds to ½ hour or more, and may be found in electrocution, drowning, cholera, after anesthesia, shock, sunstroke, cerebral concussion, narcotic poisoning, new born infants, voluntary as in yogis.*
➲ *There are 2 correct answers here – electrocution and drowning, but the better answer is 'Electrocution'*

5. **Which of the following is the reservoir of Measles?**
   a. Humans b. Swine
   c. Dog d. Mosquito

➲ *Measles is caused by Measles virus. Humans are the only natural hosts of the virus, and no other animal reservoirs are known to exist.*

6. **Iceberg phenomenon is not seen in:**
   a. Measles b. Chicken Pox
   c. Diphtheria d. Polio

➲ *Disease not following Iceberg phenomenon are: Rubella, Tetanus, Measles and Rabies.*

7. **Treatment of choice in Nasopharyngeal Carcinoma is:**
   a. Chemotherapy b. Radiotherapy
   c. Surgical Excision d. Electric Cauterisation

➲ *In Nasopharyngeal Carcinoma: MRI with gadolinium contrast and fat suppression is the imaging modality of choice. Radiotherapy is the treatment of choice; external beam radiotherapy is most commonly used.*

1.d	Broad Ligament	2.d	Oleic Acid	3.a	Glutaraldehyde
4.a.	Electrocution	5.a	Humans	6.a	Measles

7.b

8. **All of the following are the features of Zollinger Ellison Syndrome except:**
   a. Peptic Ulcers
   b. Diarrhoea
   c. Beta cells tumor of pancreas
   d. High Acid Output

➲ *Zollinger Ellison syndrome is a condition characterised by excessive levels of gastrin, usually from a gastrin secreting tumor or hyperplasia of islet cell of pancreas. Features are multiple gastroduodenal ulcers due to high acid output, malabsorption and diarrhoea. Best screening test is Fasting Gastrin Levels on 3 different days. Treatment is high dose PPIs, Octreotide and surgical resection of the gastrin adenoma..*

9. **The gold standard for diagnosis of gastroesophageal reflux disease is:**
   a. Barium Swallow
   b. Endoscopy
   c. 24 hours pH monitoring
   d. Esophageal manometry

➲ *Gold standard for diagnosing and quantifying acid reflux is 24 hour pH test. It provides total number of reflux episodes (pH<4), longest episode of reflux, number of episodes lasting > 5 minutes and extent of reflux in upright and supine position. PPI should be stopped 1 week before this test.*

10. **Unconjugated hyperbilirubinemia is seen in:**
   a. Dubin Johnson Syndrome
   b. Rotor Syndrome
   c. Gilbert's Syndrome
   d. Primary Sclerosing Cholangitis

➲ *Dubin Johnson syndrome, Rotor syndrome, Primary biliary cirrhosis, Primary sclerosing cholangitis causes conjugated hyperbilirubinemia.*

➲ *Gilbert's Syndrome causes unconjugated hyperbilirubinemia. It is the most common condition causing mild isolated hyperbilirubinaemia when all other LFTs are completely normal.*

11. **Snowstorm appearance is seen in:**
   a. H. Mole b. Hydrocephalus
   c. Ectopic Pregnancy d. Ovarian Cyst

➲ *In molar pregnancy, characteristic snowstorm appearance is seen in the ultrasound.*

12. **Snowflake cataract is seen in:**
   a. Hypertension b. Diabetes
   c. Glaucoma d. Trauma

➲ *Cataract formation is a common complication of diabetes and in adult patient nuclear opacities are more common and are similar in appearance to senile cataract. In Juvenile diabetics "Snowflake Cataract" may occur.*

➲ *These cataract are associated with accumulation of sorbitol within the lens. Osmotic changes then develop producing disorganization of lens fibers.*

13. **Which of the following is seen in ECG in hyperkalemia?**
   a. Tall P wave b. Bifid P wave
   c. Inverted T wave d. Tall T wave

➲ *ECG changes seen in Hyperkalemia include tall-tented T waves, small P waves, prolonged PR interval, widened QRS leading to a sinusoidal pattern and asystole.*

14. **Which of the following is not the feature of charcot triad?**
   a. Jaundice b. RUQ pain
   c. Fever d. Shock

➲ *Charcot's Triad consists of Fever (usually with rigors), Jaundice and right upper quadrant abdominal pain. It occurs as a result of ascending cholangitis.*

➲ *Charcot's Triad features along with Shock and Altered mental status are the features of Reynold's Pentad.*

15. **Sensation transmitted by Paccinian Corpuscle is:**
   a. Cold b. Warmth
   c. Touch d. Vibration

➲ *Paccinian Corpuscles are nerve endings in the skin responsible for sensitivity to vibration and pressure.*

Answer

1.d	Broad Ligament	2.d	Oleic Acid	3.a	Glutaraldehyde
4.a.	Electrocution	5.a	Humans	6.a	Measles
7.b	Radiotherapy	8.c	Beta cells tumor of pancreas	9.c	24 hours pH monitoring
10.c	Gilbert's Syndrome	11.a	H. Mole	12.b	Diabetes
13.d	Tall T wave	14.d	Shock	15.d	Vibration

16. **Onion Peel appearance in X-ray is seen in:**
   a. Ewing's Sarcoma b. Osteoid Osteoma
   c. Osteoclastoma d. Paget disease of bone

➲ *X-rays in Ewing's Sarcoma show an area of bone destruction classically in the diaphyseal region, formation of new bone may occur along the shaft and sometimes there is fusiform layering of a bone around the lesion, the so called onion peel appearance.*

17. **Long QT interval is not seen in:**
   a. Hypokalemia
   b. Class IA antiarrhythmic Drugs
   c. Hypercalcemia
   d. Hypomagnesemia

16.a	Ewing's Sarcoma	17.c	Hypercalcemia	18.b	Loops

19.d	Plague	20.b	Penis	21.c	10-21 mm Hg

➲ *Long QT interval is seen in:*
Congenital- Jervell-Lange Nelson syndrome, Romano-Ward Syndrome
Drugs- Amiodarone, Sotalol, SSRI, TCA, Macrolide Antibiotics, Class IA anti arrhythmics, Lithium
Others- Hypocalcemia, Hypokalemia, Hypomagnesemia, Hypothermia, Hypothyroidism.]

18. Most common type of finger print is:

a. Whorls b. Loops
c. Arches d. Composite

➲ *Loops: 67% most common*
Whorls: 25%
Arches: 6-7%
Composite: 1-2% least common

19. Quarantine was first applied for:

a. HIV b. TB
c. Leprosy d. Plague

➲ *Quarantine (40 day detention) is the restriction of activities of well persons (healthy contacts) or animals who have been exposed to a communicable disease or are travelling from a disease-endemic-zone to a non-diseased-area for a period of time equivalent to the long known incubation period of that specific communicable disease. It was for the first time applied for Plague.*
➲ *Modified quarantine refers to selective partial limitation of movement of contacts of communicable disease to protect susceptible individuals from contracting disease. Exclusion of children with chickenpox and measles from regular school is an example.*
➲ *Isolation: Separation, for the period of communicability of infected persons (Cases) or animals from others in and in such places and under such conditions, as to prevent or limit the direct or indirect transmission of the infectious agent from those infected to those who are susceptible, or who may spread the agents to others.]*

20. Peyronie's Disease affects:

a. Testis b. Penis
c. Spleen d. Thymus

➲ *Peyronie's Disease are hard plaques of fibrosis in the tunica of one or both corpora cavernosa of penis. Erect penis bends towards the side of the plaque. It is associated with history of past trauma and Dupuytren's Contracture.*

21. Intraocular pressure is:

a. 1-5 mm Hg b. 5-10 mm Hg
c. 10-21 mm Hg d. 15-19 mm Hg

22. Maximum uterine relaxation is seen with:

a. Halothane
b. Isoflurane
c. Enflurane
d. All produce equal uterine relaxation

➲ *All inhalational agents in present use (halothane, isoflurane, enflurane) and also newer agents (desflurane and sevoflurane) produce almost similar degree of uterine relaxation.*

23. Bezold Jarisch Reflex causes:

a. High cardiac output b. Tachycardia
c. Hypertension d. Bradycardia

➲ *Bezold Jarisch Reflex (coronary chemoreflex): Injection of veratridine, serotonin, capsaicin, etc into the coronary arteries supplying left ventricle causes apnea followed by rapid breathing, decrease in BP and decrease in heart rate. Receptors involved is Left ventricular C fibre endings.*

24. In the past, the Kveim skin test was used to assist in the diagnosis of:

a. Sarcoidosis b. Lung Ca
c. Scleroderma d. Rheumatoid arthritis

➲ *Kveim test, Nickerson-Kveim or Kveim-Siltzbach test is a skin test used to detect sarcoidosis, where part of a spleen from a patient with known sarcoidosis is injected into the skin of a patient suspected to have the disease. If non caseating granulomas are found (4–6 weeks later), the test is positive.*

25. Priapism is seen in:

a. Sickle Cell Anemia b. Hypertension
c. Diabetes mellitus d. Thalassemia

➲ *Priapism or painful penile erection is seen in Sickle cell Anemia. Sickling of RBC will obstruct microvasculature of penis causing its vessels to be engorged during erection which results in priapism.*

26. Preload of Heart is:

a. End Diastolic Volume
b. End Systolic Volume
c. Total Peripheral Resistance
d. Force of contraction

➲ *Preload of heart is End diastolic Volume of Heart, whereas Afterload is the total peripheral resistance.*

27. 25/m with suspected tubercular cervical lymph nodes has biopsy taken. What will be seen?

a. Foreign body giant cells
b. Touton Giant cells
c. Reed Sternberg cells
d. Langhans Giant cells

➲ *Langhans giant cells are large cells found in granulomatous condition. They are formed by the fusion of*

22.d	All produce equal uterine relaxation	23.d	Bradycardia	24.c	Scleroderma
25.a.	Sickle Cell Anemia	26.a.	End Diastolic Volume	27.d.	Langhans Giant cells

epithelioid cells and contain multiple nuclei arranged in horse shoe shaped pattern. They are typically found in tuberculosis.

28.One who purposefully does not tell truth to the court is:

a. Common Witness b. Expert Witness
c. Hostile Witness d. Perjury

➲ *A hostile witness is one who purposely makes statements contrary to facts or does not give his evidence fairly and with a desire to tell the truth to the court.*
➲ *Perjury means willful utterance of falsehood by a witness under oath.*

29. Wide fixed splitting of S2 is heard. What is the lesion?

a. ASD b. HOCM
c. ToF d. PS

➲ *Wide fixed splitting of S2 that doesn't alter with respiration is seen in Atrial Septal Defect.*

30. A patient in Surgical ICU, is lying on bed and does not open his eyes even on pain. However he makes Aaah sound and straightens his arms and legs when pinched on sternum. What is his GCS level?

a. 5/15 b. 3/15
c. 7/15 d. 9/15

➲ *Eye opening is Nil (E1), Vocal responses has vocalizing sounds only (V2), Motor responses is extension to pain (M2). GCS is hence 5/15.*

Answer

16.a	Ewing's Sarcoma	17.c	Hypercalcemia	18.b	Loops
19.d	Plague	20.b	Penis	21.c	10-21 mm Hg
22.d	All produce equal uterine relaxation	23.d	Bradycardia	24.c	Scleroderma
25.a.	Sickle Cell Anemia	26.a.	End Diastolic Volume	27.d.	Langhans Giant cells
28.c.	Hostile Witness	29.a.	ASD	30.a.	5/15

31. Angiofibroma arises from:

a. Nasopharyngeal Vault
b. Sphenopalatine fossa
c. Temporal Fossa
d. Nasal cavity

➲ *The site of origin of Nasopharyngeal angiofibroma is a matter of dispute. Earlier it was thought to arise from the roof of nasopharynx or the anterior wall of sphenoid bone but now it is believed to arise from the posterior part of nasal cavity close to the margin of sphenopalatine foramen. It is a tough rubbery tumor which arises from the lateral wall of nasopharynx.*

32. Length of NG tube to be inserted for gastric lavage is:

a. 25cm b. 50cm
c. 75cm d. 100 cm

33. Compression – ventilation ratio in CPR is:

a. 15:1 b. 15:2
c. 30:1 d. 30:2

34. Cephalic vein drains to:

a. Subclavian vein b. Brachial vein
c. Axillary vein d. Radial vein

➲ *The cephalic vein, along with the basilic vein, is one of the primary superficial veins that drain the upper limb. It courses through both the forearm and arm and terminates by draining into the axillary vein.*

35. Complication of trachoma is:

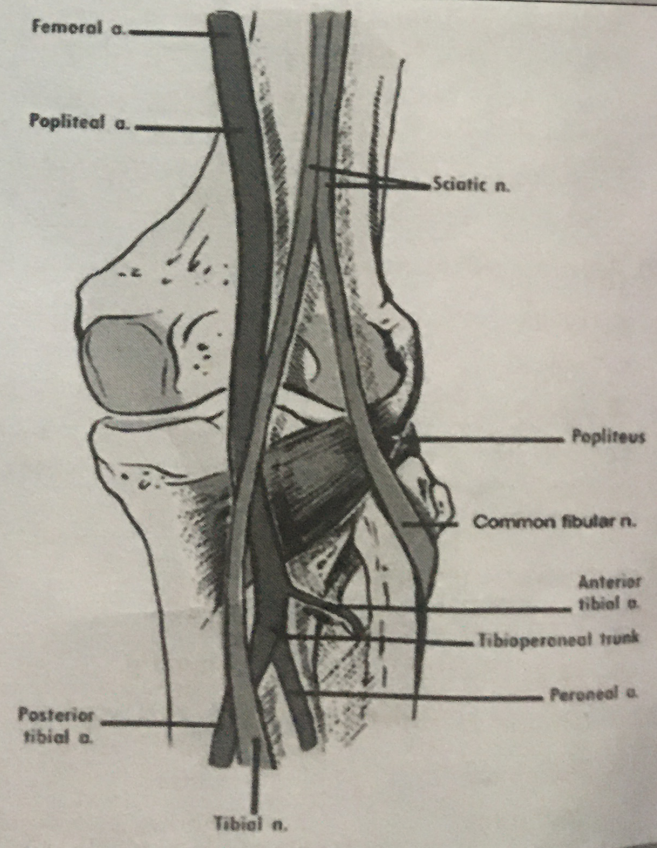
a. Trichiasis b. Corneal Ulcer
c. Cataract d. Night blindness

➲ *Corneal ulcer is the only complication of trachoma.*

36. Fracture of head of fibula, all of the following nerves are involved except:

a. Common peroneal nerve
b. Superficial peroneal nerve
c. Anterior tibial nerve
d. Tibial Nerve

➲ *Common peroneal nerve is often damaged at the level of fibular neck.*
Superficial and anterior tibial nerves are branches of common peroneal nerve. Anterior tibial nerve is another name of deep peroneal nerve.
This diagram can make you understand better:



31.b 32.b 33.d 34.c 35.b 36.d

37. **Common cause of otomycosis is:**
a. Candida b. Histoplasma
c. Aspergillosis d. Actinomyces

➲ *Otomycosis is a fungal infection of external auditory meatus. The fungi most commonly found are Aspergillusniger and candida albicans. Treatment consists of cleaning meatus and application of Clotrimazole, nystatin, or Econazole lotion. Amphotericin B is effective in candida albicans infection.*

38. **Intercostal nerve block is given at:**
a. Upper border of rib
b. Mid of intercostal space
c. Lower border of rib
d. None of the above

➲ *Neurovascular bundle lies at the lower border of rib.*

39. **Meniere's disease is characterised by:**
a. Conductive hearing loss and tinnitus
b. Vertigo, ear discharge, tinnitus and headache
c. Vertigo, tinnitus, hearing loss and headache
d. Vertigo, tinnitus and hearing loss

40. **Which of the following is not the common site of penile carcinoma?**
a. Glans b. Prepuce
c. Coronal sulcus d. Shaft

41. **The auricle develops from:**
a. 1st branchial cleft
b. 1st branchial arch
c. 1st and 2nd branchial arch
d. 1st, 2nd and 3rd branchial arch

➲ *The auricle develops from the mesenchyme of 1st and 2nd branchial arch.*
➲ *External ear canal develops from the ectoderm of 1st branchial cleft.*
➲ *Tympanic membrane is derived from all the three germ layers contributed by 1st pharyngeal/branchial arch.*

42. **The commonest site of pleomorphic adenoma is:**
a. Parotid salivary gland
b. submandibular salivary gland
c. Sublingual gland
d. Submaxillary gland

These tumors represent: 60% of tumors in parotid gland
- *Are less common in submandibular gland*
- *Are relatively rare in minor salivary gland*

43. **Zero order kinetics is seen with:**
a. Phenytoin b. Phenobarbital
c. Erythromycin d. Digoxin

➲ *Phenytoin, Ethanol and Aspirin has zero order kinetics.*

44. **Which membrane forms the transverse tubule system of skeletal muscle?**
a. Sarcolemma
b. Sarcoplasmic reticulum
c. Junctional or Subneural folds
d. Rough endoplasmic reticulum

➲ *The sarcolemma or skeletal muscle cell membrane invaginates to form the T system, or transverse tubule system.*

45. **Vitamin B1 is absorbed in the:**
a. Stomach b. Duodenum
c. Ileum d Colon

➲ *The intestinal absorption of vitamin B12 is mediated by receptor sites in the ileum.*

Answer

31.b.	Sphenopalatine fossa	32.b.	50cm	33.d.	30:2
34.c.	Axillary vein	35.b.	Corneal Ulcer	36.d.	Tibial Nerve
37.c.	Aspergillosis	38.c.	Lower border of rib	39.d.	Vertigo, tinnitus and hearing loss
40.d.	Shaft	41.c.	1st and 2nd branchial arch	42.a.	Parotid salivary gland
43.a.	Phenytoin	44.a.	Sarcolemma	45.c.	Ileum

46. **Which of the following immunoglobulins can cross placenta?**
a. IgA b. IgM
c. IgG d. IgD

47. **Sputum examination for AFB is a type of:**
a. Primary Prevention
b. Secondary prevention
c. Tertiary Prevention
d. Primordial Prevention

➲ *Sputum examination for AFB is a specific intervention directed at early diagnosis and adequate treatment thereafter. It is thus an example of secondary prevention.*

48. **Pugilistic Attitude is due to:**
a. Lipolysis
b. Protein Coagulation
c. Carbohydrate Coagulation
d. Lipogenesis

➲ *Pugilistic attitude is seen in cases of burns, and is due to coagulation of proteins other than those affected by rigor mortis. Remember that pugilistic attitude also has no Medicolegal significance.*

49. **In JVP, 'a' waves are absent in:**
a. Atrial Fibrillation b. Mitral Stenosis
c. Tricuspid atresia d. Sick Sinus Syndrome

46.c 48.b
47.b 49.a

➲ *a wave is due to distension produced by Right Atrial Contraction. Absent a waves in atrial fibrillation.*

50. Charcot triad is:

a. Fever, pain and vomiting
b. Fever, stone and Jaundice
c. Fever, pain and jaundice
d. Stone, vomiting, jaundice

➲ *Charcot's triad is seen in cholangitis and contains Fever, RUQ pain and Jaundice.*

51. The most common cause of diarrhoea in children is:

a. Vibrio cholera
b. E coli
c. Rota virus
d. Pneumococcus

52. Most common site of genital tuberculosis is:

a. Ovary
b. Uterus
c. Cervix
d. Fallopian tube

➲ *Fallopian tube is the most frequent involved part of the genital tract and provides over 90% of all genital tubercular lesions.*

53. Most common type of eye lid carcinoma is:

a. Squamous cell
b. Basal cell
c. Adenocarcinoma
d. Melanoma

➲ *The most common malignant epithelial growth of lid is basal cell carcinoma (rodent ulcer) and it shows a predilection for inner canthus.*

54. Which of the following sinus is not present at birth?

a. Ethmoidal
b. Maxillary
c. Frontal
d. Sphenoid

55. Ortolani test is done for:

a. Congenital dislocation of hip
b. Traumatic dislocation of hip
c. Rheumatoid arthritis
d. Tuberculous arthritis

➲ *Ortolani test are the test for congenital dislocation of hip. Hips are flexed and then abducted while fingers try to reduce the dislocated head.*

56. Post spinal Headache can be prevented by:

a. Use of thinner needle
b. NSAIDs
c. Preanesthetic medication
d. Plenty of oral fluids

➲ *The most important causative factor of spinal headache is needle size, so use of small gauge needle is the best method to prevent post spinal headache.*

57. Permethrin is used in the treatment of:

a. Scabies
b. Leprosy
c. Body louse
d. Leishmaniasis

58. Opiate withdrawal is treated with:

a. CPZ
b. Nalorphine
c. Pethidine
d. Methadone

59. Coarctation of aorta may be associated with all of the following except:

a. Bicuspid aortic valve
b. Turner syndrome
c. Renal artery stenosis
d. PDA

➲ *Turner's syndrome is associated with Coarctation of aorta and bicuspid aortic valve. Most common associated congenital anomalies with Coarctation of aorta is bicuspid aortic valve. PDA may be associated.*

60. Non parenteral hepatitis is:

a. Hepatitis E
b. Hepatitis B
c. Hepatitis C
d. Hepatitis D

➲ *Hepatitis A and E are spread through non parenteral routes.*

Answer

46.c.	IgG	47.b.	Secondary prevention	48.b.	Protein Coagulation
49.a.	Atrial Fibrillation	50.c.	Fever, pain and jaundice	51.c.	Rota virus
52.d.	Fallopian tube	53.b.	Basal cell	54.c.	Frontal
55.a.	Congenital dislocation of hip	56.a.	Use of thinner needle	57.a.	Scabies
58.d.	Methadone	59.c.	Renal artery stenosis	60.a.	Hepatitis E

Case Based Questions

I. A 28 years old G3P1L1A1 at 32 weeks of gestation visits your health center with complain of copious amount of painless vaginal bleeding. Bleeding started 2 weeks earlier when there used to be slight bleeding but she ignored. Suddenly today she found to have massive bleeding while she was resting after having food. She could not recall any history of injury to abdomen or genitalia. Her last pregnancy ended at 13 weeks with incomplete abortion after which she had undergone dilatation and curettage.

61. What is the most likely diagnosis?

a. Placenta Previa
b. Abruptio plancenta
c. Onset of premature contractions
d. Rupture of membranes

62. **Which is the most dangerous type of placenta previa?**

a. Type 2 anterior
b. Type 2 posterior
c. Type 3
d. Type 4

63. **What may be the examination finding in above patient?**

a. Size of uterus is proportionate to the weeks of gestation.
b. Head is floating and cannot be pushed in to pelvis
c. Stallworthy's Sign
d. All of the above

64. **Couvelaire uterus is the finding in:**

a. Placenta Previa
b. Abruptio Placentae
c. IUFD
d. All of the above

65. **Antepartum hemorrhage is defined as the bleeding from or into the genital tract after ..... Weeks of gestation but before the birth of the bayd.**

a. 20 weeks
b. 28 weeks
c. 32 weeks
d. 36 weeks

Answer					
61.a.	Placenta Previa	62.b.	Type 2 posterior	63.d.	All of the above
64.b.	Abruptio Placentae	65.b.	28 weeks		

II. A person has been drinking alcohol heavily since last 7 years. Now he suddenly presents with jaundice. On examination hepatomegaly and feature of moderate encephalopathy was found but no signs of ascites and portal hypertension. He was diagnosed to be a case of ALD.

66. **In which category of ALD, will you put the patient in?**

a. Alcoholic fatty liver disease
b. Alcoholic hepatitis
c. Alcoholic cirrhosis
d. Fulminant hepatic failure

➲ *Alcoholic hepatitis presents with jaundice and hepatomegaly; complications of portal hypertension may also be present. About one third of patients die in the acute episode, particularly those with hepatic encephalopathy or a prolonged PT.*

➲ *Alcoholic cirrhosis often presents with a serious complication, such as variceal hemorrhage or ascites.*

67. **Where is the alcohol metabolized in the liver cells?**

a. Cytoplasm
b. Mitochondria
c. Endoplasmic reticulum
d. Lysozymes

➲ *Approx 80% of alcohol is metabolized to acetaldehyde by the mitochondrial enzymes, alcohol dehydrogenase. The remaining 20% of alcohol is metabolized by the microsomal ethanol oxidizing system (MEOS) pathway.*

➲ *Investigations of this patient shows:*
Hb 10.8 gm/dl
TSB: 11.6 mg/dl
PT: 5 sec more than control
AST: 116 U/L
ALT: 96 U/L
LDH: 200 IU/L

68. **Calculate the Madrey's discriminant score in this patient.**

a. 18.8
b. 24.6
c. 34.6
d. 81

FORMULA
*Discriminant Function = 4.6 * (Pt's PT - Control PT) + T Bilirubin*

69. **What is the prognosis based on this score?**

a. Good
b. Excellent
c. Poor
d. Borderline

➲ *Value above 32 implies severe liver disease with a poor prognosis and is used to guide treatment.*

70. **With such prognostic state, which of the following therapy has been found beneficial to improve the overall survival rate to some extent?**

a. Steroid
b. Antibiotics
c. Liver transplantation
d. Gamma interferon

➲ *Corticosteroids are of value in patient with severe alcoholic hepatitis (Madrey's discriminant score > 32) and increase survival at 28 days from 65% 5o 85%.*

Answer					
66.b.	Alcoholic hepatitis	67.b.	Mitochondria	68.c.	34.6
69.c.	Poor	70.a.	Steroid		

III. A 11 year old male presents with chief complaint of dark colored urine and dull lumbar pain. His BP is 150/90mm Hg. There was past history of fever with pharyngitis 2 weeks ago. However, his pharyngeal structures are normal at present.

71. **Most likely diagnosis is:**

a. Nephrotic syndrome
b. Glomerulonephritis
c. Nephrolithiasis
d. Renal Tumor

72. **What aspect of physical examination do you suggest**
   a. Neurological status
   b. Lung auscultation
   c. Abdominal Examination
   d. Detection of palpable edema

73. **The most important additional test is:**
   a. S. creatinine b. Urinalysis
   c. Chest X ray d. USG abdomen

74. **Which of the following is most important therapeutic intervention following admission to the hospital?**
   a. Administration of antibiotic
   b. Administration of large quantities of fluid
   c. Salt and protein restricted diet
   d. Administration of spasmodic

75. **All are true of nephrotic syndrome except:**
   a. RBC cast in urine b. Edema
   c. Hypoproteinemia d. Hyperlipidemia

Answer					
71.b.	Glomerulonephritis	72.d.	Detection of palpable edema	73.b.	Urinalysis
74.c.	Salt and protein restricted diet	75.a.	RBC cast in urine		

IV. A 35 years old female presented with a swelling in the neck for the past 2 months, she had the treatment for Hodgkin's Lymphoma when she was 2 years with irradiation. On examination, her vitals were normal, there was a single, firm, irregular nodule, moving with deglutition in the left side of midline. Clinical examination also revealed a single node in the left side of the neck.

76. **The most likely clinical diagnosis of these conditions is:**
   a. Recurrence of lymphoma
   b. Malignant goiter
   c. Benign multinodular goiter
   d. Toxic nodular goiter

➲ *Most common cancer of thyroid in people exposed to external radiation is papillary carcinoma. It accounts for 80% of thyroid malignancies in iodine sufficient areas.*

77. **Most probable pathological diagnosis would be:**
   a. Anaplastic carcinoma
   b. Follicular carcinoma
   c. Medullary carcinoma
   d. Papillary carcinoma

78. **The FNAC of the lesion should reveal:**
   a. Orphan-Annie eye nucleus cells
   b. Amyloid deposits
   c. Epithelioid cells and giant cells
   d. Follicular cells

79. **The ideal treatment of the above condition would be:**
   a. Total thyroidectomy with lymph nodal dissection of the same side
   b. Radiotherapy
   c. Lobectomy
   d. Lobectomy with isthmusectomy

80. **Which route of metastasis is more common in this case?**
   a. Lymphatic
   b. Distant through hematogenous
   c. Direct invasion to tissues
   d. All of the above

Answer					
76.b.	Malignant goiter	77.d.	Papillary carcinoma	78.a.	Orphan-Annie eye nucleus cells
79.a.	Total thyroidectomy with lymph nodal dissection of the same side	80.a.	Lymphatic		

V. A 55 year old female with LMP 5 years ago presents with a chief complaint of vaginal spotting. Her spotting is not related to sexual acitivity. She complaints of burning sensation in the vagina. She denies any medical conditions and is not on any medications. Pelvic exam reveals a dry vagina with decreased rugae.

81. **What could be a provisional diagnosis in this case?**
   a. Ca cervix
   b. Endometrial TB
   c. Postmenopausal HRT
   d. Adenomyosis

82. **Pap smear is useful in diagnosis of all, except:**
   a. Gonorrhea
   b. TrichomonasVaginalis
   c. Human Papilloma Virus
   d. Inflammatory changes

➲ *[A number of infectious processes, including yeast, candidiasis, HSV and Trichomoniasis can also be detected. However, it is not very sensitive at detecting these*

infections, so absence of these infections on pap smear doesn't rule them out.]

83. Transvaginal USG reveals endometrial thickness of 8.0 mm. The next step in the management of this patient is:

a. Hysterectomy
b. Start progesterone therapy
c. Histopathological examination and curettage
d. Follow up sonography

➲ *[Postmenopausal women with endometrial thickness >5mm require histopathological examination of the endometrium which can be performed by 'Hysteroscopy and endometrial biopsy' or 'Dilatation and Currettage']*

84. Staging of most of the gynecological carcinoma is done surgically except one of the following in which staging is done clinically:

a. Ovarian Carcinoma
b. Tubal Carcinoma
c. Endometrial Carcinoma
d. Cervical Carcinoma

85. What is the ideal treatment of this female, if the histopathology reveals simple hyperplasia of endometrium with atypia?

a. Simple hysterectomy
b. Medroxyprogesterone acetate (MPA)
c. Levonorgesterol (LNG)
d. IUCD

Answer					
81.a.	Ca cervix	82.a.	Gonorrhea	83.c.	Histopathological examination ....
84.d.	Cervical Carcinoma	85.a.	Simple hysterectomy		

VI. A 13 year old boy presented with gradually increasing swelling and pain since last 6 months over the upper part of tibia. His x ray shows lytic lesions with sclerotic margin in the upper tibial metaphysis.

86. Most likely diagnosis for this case is:

a. Acute osteomyelitis
b. Brodie's Abscess
c. Chronic osteomyelitis
d. Osteosarcoma

87. This sort of condition is seen in:

a. Immunosuppressed persons
b. Immunocompetent persons
c. Patients on oral antibiotics
d. Genetically predisposed persons

88. All are true about chronic osteomyelitis except:

a. Reactive new bone formation
b. Cloaca is an opening in involucrum
c. Involucrum is dead bone
d. Sequestrum is hard and porus

89. Which of the following is not true about tubercular osteomyelitis?

a. It is secondary TB
b. Periosteal reaction is seen
c. Sequestrum is uncommon
d. Inflammation is minimal

90. How would you manage the above patient?

a. Continuous suction and continuous drainage
b. Intermittent suction and continuous drainage
c. Surgical evacuation and curettage under antibiotic cover
d. Sequestrectomy with antibiotics

➲ *Lytic lesion with sclerotic margin in upper end of tibia in a 13 year old boy suggests brodie's abscess. Lytic lesion with sclerotic margins are also seen in simple bone cyst, osteoblastoma and chondroblastoma.*
Brodie's abscess is Subacutehematogenous osteomyelitis. It is seen in immunocompetent hosts.
Periosteal reaction is usually not seen in tubercular osteomyelitis. Involucrum is the dense sclerotic new bone (not a dead bone unlike sequestrum) overlying a sequestrum formed from deep layers of stripped periosteum.

Answer					
86.b.	Brodie's Abscess	87.b.	Immunocompetent persons	88.c.	Involucrum is dead bone
89.b.	Periosteal reaction	90.c.	Surgical evacuation		

VII. A 35 years old female presented with a swelling in the neck for the past 2 months, she had the treatment for hodgkin's lymphoma when she was 2 years with irradiation. On examination her vitals were normal, there was a single, firm, irregular nodule, moving with deglutition in the left side of midline. Clinical examination also revealed a single node in the left side of the neck.

91. The most likely clinical diagnosis of these conditions is:

a. Recurrence of lymphoma
b. Malignant goiter
c. Benign multinodular goiter
d. Toxic nodular goiter

X-ray findings in chronic osteomyelitis show a central lytic bone defect with surrounding sclerosis termed as Brodie's abscess.

➲ *[Most common cancer of thyroid in people exposed to external radiation is papillary carcinoma. It accounts for 80% of thyroid malignancies in iodine sufficient areas.]*

92. Most probable pathological diagnosis would be:

a. Anaplastic carcinoma
b. Follicular carcinoma
c. Medullary carcinoma
d. Papillary carcinoma

93. The FNAC of the lesion should reveal:

a. Orphan Annie eye nucleus cells
b. Amyloid deposits
c. Epitheloid cells and giant cells
d. Follicular cells

[Histological characteristics of papillary carcinoma of thyroid:
Papillary projections
Orphan annie eye nuclei. The nuclei contain finely dispersed chromatin, which imports an optically clearly or empty appearance giving rise to term ground glass or orphan annie eye nuclei.
Psammoma bodies]

94. The ideal treatment of the above condition would be:

a. Total thyroidectomy with lymph nodal dissection of the same side
b. Radiotherapy
c. Lobectomy
d. Lobectomy with isthmusectomy

➲ *[Treatment of papillary ca is total or near total thyroidectomy. During thyroidectomy enlarged central neck nodes should be removed.]*

95. Which route of metastasis is more common in this case?

a. Lymphatic
b. Distant through hematogenous
c. Direct invasion to tissues
d. All of the above

[Papillary ca mainly spreads via lymphatics.]

Answer

91.b.	Malignant goiter	92.d.	Papillary carcinoma	93.a.	Orphan Annie eye .....
94.a.	Total thyroidectomy	95.a.	Lymphatic		

VIII. A 9 month child presented with fever, neck stiffness, abnormal body movement for 1 day, stare look with up rolling of bilateral eyes. He has no history of upper respiratory tract infection. He was immunized with Hemophilus influenza b vaccine.

96. What is the likely diagnosis?

a. Febrile Seizure
b. Meningitis
c. Encephalitis
d. Metabolic encephalopathy

97. What is the clinical sign of above case?

a. Buldging pulsatile anterior fontanelle
b. Hypertension
c. Normal CSF picture
d. Bulging non pulsatile anterior fontanelle

98. Despite vaccination with Hemophilus influenzae vaccine. What is the likely organism causing this condition?

a. Streptococcus pneumonia
b. Hemophilus influenza
c. E coli
d. Pseudomonas

99. For CSF analysis, what is the site of lumbar puncture in this age group?

a. L1-L2 b. L2-L3
c. L3-L4 d. L5-L6

100. Which antibiotic will you prefer?

a. Third generation cephalosporin
b. Vancomycin
c. Flucloxacillin
d. Azithromycin

Answer

96. b.	Meningitis	97. d.	Bulging non....	98.a.	Streptococcus pneumonia
99.c.	L3-L4	100.a.	Third generation		

NMCLE - 2075 MANGSIR

1. **Digoxin increases myocardial contractility by this mechanism:**
   a. Ca^{2+}
   b. Opening Ca^{2+}
   c. Closure of Cl^- chanels
   d. Inhibiting Na^+k^+ ATPase in the membrane

Digoxin inhibits Na^+/K^+ exchange by Na^+/K^+ ATPase
↓
The concentration of intracellular Na^+ increases and the concentration gradient across the membrane decreases
↓
Increased Na^+ decreases the driving force for the Na^+/Ca^{2+} exchanger, so there is decreased extrusion of Ca^{2+} into the extracellular space
↓
Increased intracellular Ca^{2+} leads to increased myocardial contraction

Ref: Lippincott's Pharmacology 5th edition Pg 196 d

2. **Dignostic power of test is shown by**
   a. Predictive value b. Sensitivity
   c. Specificity d. Precision

- *Sensitivity of a screening test is the ability of a test to detect true positives.*
- *Specificity of a screening test is the ability of a test to detect true negatives.*
- *Usefulness of a screening test is given by: Sensitivity*
- *Diagnostic power of a screening test: Predictive value.*
  1. *Diagnostic power of a screening test to correctly identify a disease: Positive predictive value.*
  2. *Diagnostic power of a screening test to correctly exclude a disease: Negative predictive value*

Ref: Review of Preventive and Social Medicine (Vivek Jain) 7th edition Pg 218-219 a

3. **The vaccine contraindicated in pregnancy is**
   a. Hep B b. Influenza
   c. Rabies d. Rubella

- *Vaccines Contraindications*
  - *Pregnancy: All live vaccines except yellow fever vaccines*
  - *Asymptomatic HIV: None, Symptomatic HIV: All live vaccines.*
  - *Immunosuppression/Steroid therapy: All live vaccines*
  - *Fever: Typhoid vaccines*
  - *Diarrhea/Acute Respiratory Tract Infections: None*
  - *Preterm/LBW (<2kg) baby: Hepatitis B.*
  - *Progressive neurological disease: Pertusis vaccine (not C/I in cerebral palsy or epilepsy controlled with medications)*
  - *Only absolute contraindication to a killed vaccine: Severe local or generalized reaction to a previous dose.*

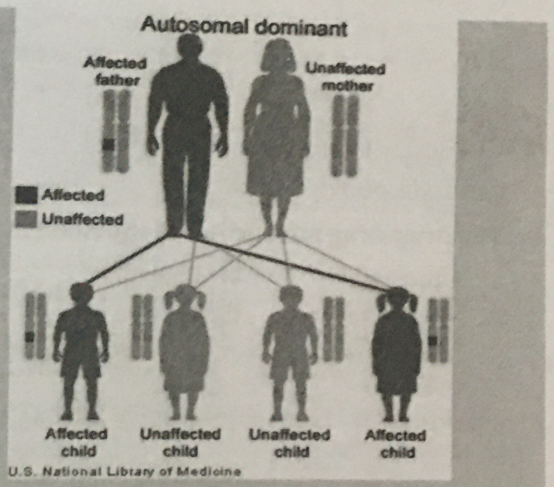
Ref: Review of Preventive and Social Medicine (Vivek Jain) 7th edition Pg 113-114

4. **The most common position of appendix is**
   a. Preileal b. Postileal
   c. Retrocecal d. Pelvic

- *Retrocecal = 75%*
- *Pelvic = 21%*
- *Paracaecal = 2%*
- *Sub caecal = 2%*
- *Pre-ileal = 1%*
- *Post-ileal = 0.5%*

Ref: SRB's Manual of Surgery 5th edition Pg 937-938

5. **A condition with autosomal dominant inheritance affects one parent and**
   a. 25% of boys and 75% of girls
   b. 25% of girls and 75% of boys
   c. 50% of boys and 50% of girls
   d. None



- *Autosomal dominant conditions:*
  - *NF type 1*
  - *MarfanSyndrome*
  - *Huntington disease*
  - *Achondroplasia*
  - *Familial hypercholesterolemia*

Ref: wikipedia.org

6. **The total power of human eye is**
   a. +6 D b. +12 D
   c. +48 D d. +60 D

- *Total optical power of a relaxed human eye is approx 60 dioptres. The cornea accounts for approx three fourth of this refractive power (about 45 dioptres) and the crystalline lens contributes the remaining one-fourth (about 15 dioptres)*

Ref: Comprehensive Ophthalmology 5th edition (A.K. Khurana) Pg 89

1.d	Inhibiting Na+k+ ATPase...	2.a	Predictive value	3.d	Rubella
4.c	Retrocecal	5.c	50% of boys and 50% of girls	6.d	+60 D

7. Which condition is associated with decreased corneal sensation?

a. Herpes Simplex Keratitis
b. Bacterial corneal ulcer
c. Iridocyclitis
d. Fungal keratitis

- *Herpes keratitis: HSVI (more common), HSV II*
- *Superficial infection ⇒ involves only the epithelium; heals without scarring.*
- *Deeper layers of cornea ⇒ may lead to scarring of the cornea, loss of vision & sometimes even blindness.*
- *Damages the nerve fibres supplying the cornea*
- *Results dendritic ulcer*

Ref: Comprehensive Ophthalmology 5th edition (A.K. Khurana) Pg 102-103

8. The role of iodine in Gram's stain is:

a. cofactor for crystal violet
b. mordant
c. Primary stain
d. counter-stain

- *A mordant binds a chemical dye and holds it down, such that the dye remains stuck on the organism.*
- *In Gram's stain, Crystal Violet = Primary stain*
  Iodine = Mordant
  Ethanol/Acetone = Decoloriser
  Safranin = Counter Stain

Ref: wikipedia.org

9. The drug-drug interaction of sildenafil is with

a. Alprostadil b. Digoxin
c. Nifedipine d. Nitrates

- *Sildenafil has significant interactions with both alprostadil and nitrates.*
- *Sildenafil = Phosphodiesterase 5 inhibitor*

Uses of sildenafil

1. *Erectile dysfunction*
2. *Pulmonary arterial hypertension*

- *Use of sildenafil is contraindicated in patients currently taking nitrate preparations due to the risk of significant hypotension.*

Ref: UpToDate

10. A lady has a 6 cm sized breast mass with fixed ipsilateral axillary lymph nodes. The stage is:

a. Stage I b. Stage II
c. Stage III a d. Stage III b

Stage 0	*= Non-invasive cancer = T_{is}, N_0, M_0*
Stage IA	*= $T_1N_0M_0$*
Stage IB	*= T_0 or $T_1N_1M_0$*
Stage IIA	*= $T_2N_0M_0$*
Stage IIB	*= $T_2N_1M_0$, $T_3N_0M_0$*
Stage IIIA	*= T_0, T_1, T_2 or $T_3N_2M_0$; $T_3N_1M_0$*
Stage IIIB	*= T_4, N_0, N_1 or N_2, M_0*

7.a	Herpes Simplex Keratitis	8.b	mordant	9.d	Nitrates
10.c	Stage III a	11.b	30	12.c	Respiratory syncytial virus

Ref: SRB's manual of surgery 3rd edition, Pg 340

11. A person of 89 kg has height of 172 cm. What is his BMI?

a. 28 b. 30
c. 33 d. 36

$$\text{Body Mass Index} = \frac{\text{Weight (in kg)}}{(\text{Height in metre})^2}$$

$$= \frac{89}{(1.72)^2} = 30\ kg/m^2.$$

12. The most common organism associatedwith bronchiolitis is:

a. Adenovirus
b. Coronavirus
c. Respiratory syncytial virus
d. Para-influenza

Bronchiolitis *= Lower respiratory tract infection in children < 2 years of age*
Wheezing present, Crackles present

Etiology: Viral: *RSV (MC), Influenza, Parainfluenza, Adenovirus, Rhino virus.*

Bacterial: *Mycoplasma Pneumoniae*

Ref:Ghai Essential Pediatrics Eighth edition, Pg 381

13. A man sustained spleen rupture during RTA and needs laparotomy. Which agent is not to be used as he also has pneumothorax?

a. Halothane b. Isoflurane
c. Nitrous oxide d. Desflurane

- *Nitrous Oxide tends to diffuse into air containing cavities. If the walls surrounding the cavities are rigid, pressure rises instead of volume.*
- *Nitrous oxide can therefore be hazardous in venous or arterial air embolism, pneumothorax, acute intestinal obstruction with bowel distension, intracranial air, intra – ocular air bubbles.*

Ref: Morgan and Mikhail's Clinical Anaesthesiology 5th edition, Pg 166

14. The professional negligence of a doctor is punishable by

a. Civil court
b. Criminal court
c. Ethical board formed by Nepal Medical Council
d. Hospital Administration.

- *Professional negligence by a medical doctor is seen by ethical board formed by Nepal Medical Council.*

15. A 3 yr girl has weight of 8 kg and height of 90 cm. What is the grade of malnutrition?

a. Mild
b. Moderate
c. Severe
d. Very severe

Average weight of 3yr girl is 14.2 kg

Then, Her wt. for age comes out to be $= \frac{8}{14.2} \times 100$

$= 56.33\%$

IAP grading of malnutrition: Wt. for age

Normal	*≥80%*
Mild	*70-80%* ←
Moderate	*60-70%*
Severe	*50-60%* ←
Very Severe	*<50%*

Ref: IAP Textbook of Pediatrics Pg 155

Answer

1.d	Inhibiting Na+k+ ATPase...	2.a	Predictive value	3.d	Rubella
4.c	Retrocecal	5.c	50% of boys and 50% of girls	6.d	+60 D
7.a	Herpes Simplex Keratitis	8.b	mordant	9.d	Nitrates
10.c	Stage III a	11.b	30	12.c	Respiratory syncytial virus
13.c	Nitrous oxide	14.c	Ethical board formed by ...	15.c	Severe

16. Succinylcholine results in muscle relaxation due to

a. Persistent depolarization
b. Competitive antagonism
c. Muscle disintegration
d. Central action

Succinylcholine is a depolarizing neuromuscular blocker.
Onset of axn: 20-30 sec (Shortest acting muscle relaxant)
Duration of axn = 3-5 min
Dose = 1-2 mg/kg

- *Malignant hyperthermia: Succinylcholine is most commonly implicated.*
- *Can cause post-operative myalgia and fasciculations*

Ref: Pharmacology by Bhattacharya 2nd edition, Pg 236

17. A hypertensive man is on hydralazine. What side effect can he have?

a. Sweating
b. Pedal edema
c. Blurting of vision
d. Tachycarclia

Hydralazine: *Direct vasodilator, dilates arterioles with little effect on vein*

Adverse effects

- *Hypotension*
- *Tachycardia, Palpitations*
- *Nausea, sweating*
- *Headache*

Ref: Lippincott Pharma Review 5th edition, Pg 239

18. The most common site of cholangiocarcinoma is

a. Intrahepatic
b. Common bile duct
c. Hepatic duct bifurcation
d. Distal end of common bile duct

Intrahepatic tumors = least common
Extrahepatic Perihilar/Klatskin tumors = most common (Occur at the bifurcation of common hepatic duct)
Distal extrahepatic = Located from the upper border of pancreas to the ampulla
>90% are adenocarcinomas and the remainders are squamous cell cancer.

Ref: SRB's Manual of Surgery 5th edition Pg 661

19. Which of these is not a live vaccine?

a. OPV
b. BCG
c. Measles
d. Rabies

Live attenuated: *Bacterial: BCG, Oral typhoid, Plague*
Viral: *OPV, MR, Varicella, yellow fever, Influenza (LAIV), Cell cultured live JE (Used in Nepal)*
Killed or inactivated:
Bacterial: *Whole cell killed typhoid, DTPw, cholera*
Viral: *Salk polio vaccine (IPV), Rabies, Hep. A, killed influenza, killed JE, Hep. B*
Toxoids: *Tetanus & Diphtheria*
Subunit: Viral: *Hep. B, HPV*
Bacterial capsular polysaccharide: *H.influenza type b (Hib), Meningococcal, Pneumococcal.*

Ref: Review of Preventive & Social Medicine Vivek Jain 7th edition, Pg 112-113

20. A 65 yrs male has testicular tumor. He most likely has

a. Germ cell tumor
b. Sertoli cell tumor
c. Teratocarcinema
d. Lymphoma

- *Testicular cancer can occur at any age, but it is most common between the ages of 15 and 35 yrs (median age = 33). Testicular germ cell tumors are the most common solid tumor in this age group. There is a secondary peak in incidence after age 60. Seminoma is the most common histology in the older population.*
- *Germ cell cancers are sensitive to chemotherapy.*

Ref: Medscape.com

21. The denominator in crude birth rate is:

a. Total live births
b. Mid year population
c. Total population
d. Total number of deaths

- *Crude birth rate is the number of live births occurring among the population of a given geographical area during a given year, per 1000 mid-year total population of the given geographical area during the same year.*

$$CBR = \frac{\text{No. of live births in a population in a geographical area in a given year}}{\text{Mid-year total population of the area in that year}} \times 1000$$

Ref: Review of Preventive & Social Medicine Vivek Jain 7th edition, Pg 94

22. Ptosis results due to ..... Injury.

a. CN II
b. CN III

16.a.	Persistent depolarization	17.d.	Tachycarclia	18.c.	Hepatic duct bifurcation
19.d.	Rabies	20.a.	Germ cell tumor	21.b.	Mid year population

c. VN VII d. CN X

- *Ptosis refers to drooping of upper eyelid that usually results from a congenital or acquired abnormality of the muscles that elevate the eyelid.*
- *Oculomotor (CN III) innervates the levatorpalpebrae superioris to elevate the upper eyelid.*
- *An additional accessory smooth muscle, Muller's muscle, is innervated by sympathetic nervous system; contributes to 1-2mm elevation of upper eyelid ptosis in Horner's syndrome is due to the weakness of this muscle.*

23. The disease caused by "Borreliarecurrentis" is:

a. Relapsing fever b. Katayama fever
c. Undulating fever d. Quartan fever

- *Borreliarecurrentis causes Louse-borne relapsing fever.*
- *Arthropod-borne infection*
- *Course of fever = Sudden onset of fever, punctuated by an intervening afebrile period and then recurrent fevers.*
- *Katayama fever = Systemic hypersensitivity reaction to schistosome antigens and immune complexes that occur 3-8 weeks after infection. (Acute Schistosomiasis syndrome)*

Ref: medscape.com

24. Shaking palsy is due to

a. Lead poisoning b. Arsenic poisoning
c. Mercury poisoning d. $CuSO_4$ toxicity

- *Shaking palsy is due to mercury toxicity.*
  In elderly population, differential diagnoses are Parkinson disease, Alzheimer disease, Senile dementia.
- *Minamata disease = also due to mercury poisoning*
- *Seafood consumption can lead to mercury toxicity.*

Ref: medscape.com

25. GorlinGoltz syndrome is associated with

a. Odontogenic keratocyst
b. Dentigerons cyst
c. Primordial cyst
d. Radicular cyst

- *Gorlin-Goltz syndrome is a rare autosomal dominant disorder, consisting of multiple odontogenic keratocysts, multiple basal cell carcinomas, skeletal, dental, ophthalmic & neurological abnormalities and facial dysmorphism.*

Ref: Radiopaedia.org

26. Most common intracranial cause of sudden death is

a. Epilepsy
b. Subarachnoid hemorrhage
c. Cerebellar hemorrhage
d. Bacterial meningitis

- *Epilepsy is the most common intracranial cause of sudden death. There's a term 'Sudden Unexplained Deaths in Epilepsy Patients' to represent them.*

Common intracranial causes:

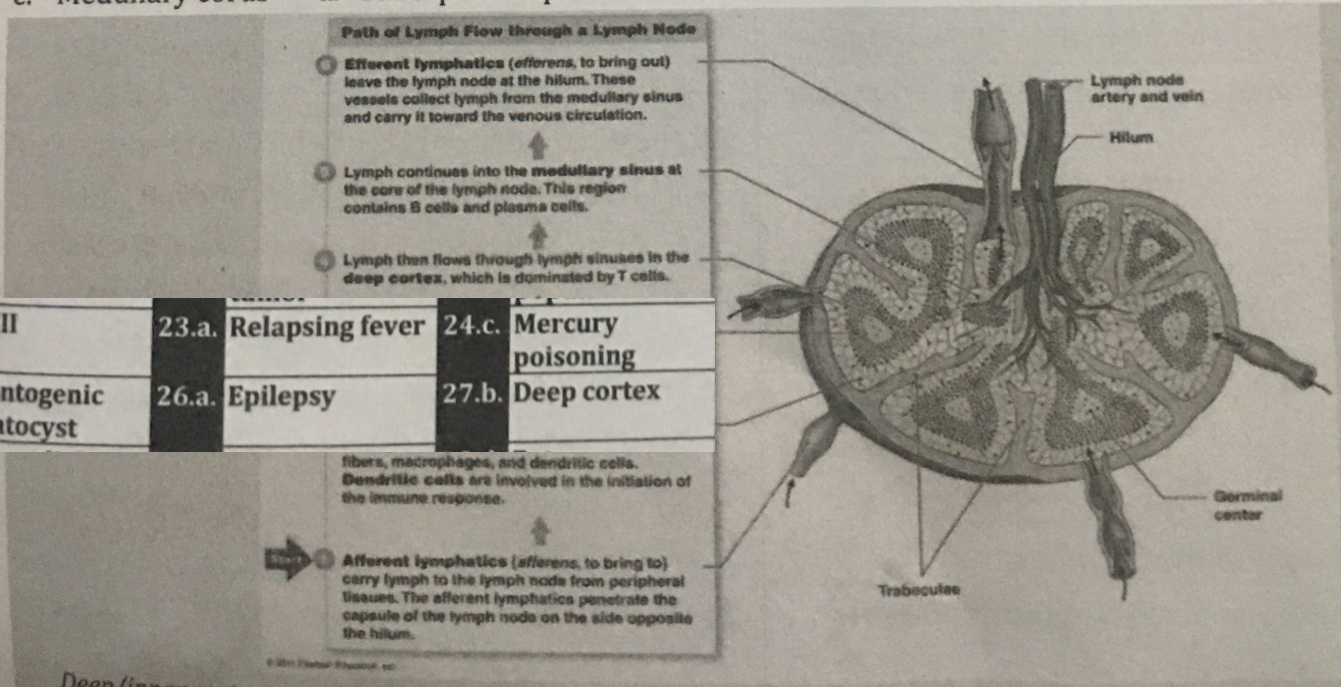
1. *Epilepsy*
2. *Intracranial hemorrhage: Traumatic or non-traumatic*
3. *Pyogenic meningitis*

Other causes of sudden deaths:

1. *Cardiac cause = Most common (Hypertroph cardiomyopathy in young people)*
2. *Drug overdosing.*

27. The part of lymph node which is most dependent on thymus is

a. Outer cortex b. Deep cortex
c. Medullary cords d. Subcapsular space



22.b.	CN III	23.a.	Relapsing fever	24.c.	Mercury poisoning
25.a.	Odontogenic keratocyst	26.a.	Epilepsy	27.b.	Deep cortex

Deep/inner cortex contains T-lymphocytes and is also known as Thymus dependent zone.

28. **Anitschkow cells are**

a. cardiac myocytes b. Myocardial histiocytes
c. Endocardial cells d. Endothelium

- *In acute rheumatic fever, 'Aschoff bodies' can be seen in the heart that consists of foci of T lymphocytes, occasional plasma cells and plump activated macrophages called Anitschow cells.*

Histiocytes = Tissue macrophages.

Ref: Robbins Pathologic Basis of Disease 8th edition, Pg 565

29. **Human breast milk has more ..... than cow milk**

a. Calorie b. Proteins
c. Lactose d. Fat

Composition of milk from different types of animals:

	Protein%	Casein%	Whey Protein%	Fat%	Lactose%
Human	1.2	0.5	0.7	3.8	7.0
Cow	3.5	2.8	0.7	3.7	4.8
Buffalo	4.0	3.5	0.5	7.5	7.5
Goat	3.6	2.7	0.9	4.1	4.7

Ref: researchgate.net

30. **The most common site of intracranial bleeding in hypertension is:**

a. Internal capsule
b. Cerebral cortex
c. Subarachnoid space
d. Putamen

- *Putamen is the most common intracranial site for hypertensive bleed.*
- *In the decreasing order of frequency, most common sites of hypertensive intracranial bleeds are basal ganglia (putamen/caudate), thalamus, pons and cerebellum.*

Ref: casemed.case.edu (Neuroscience clerkship)

Answer

16.a.	Persistent depolarization	17.d.	Tachycarclia	18.c.	Hepatic duct bifurcation
19.d.	Rabies	20.a.	Germ cell tumor	21.b.	Mid year population
22.b.	CN III	23.a.	Relapsing fever	24.c.	Mercury poisoning
25.a.	Odontogenic keratocyst	26.a.	Epilepsy	27.b.	Deep cortex
28.b.	Myocardial histiocytes	29.c.	Lactose	30.d.	Putamen

31. **Opium poisoning leads to**

a. Shallow breathing
b. Rapid & deep breathing
c. Rapid & shallow breathing
d. None

- *Opioids inhibit Pre-Botzinger complex.*
- *Higher opioid doses cause reduction in tidal volume resulting shallow breathing.*

32. **Most common indication of surgery in Crohn's disease is**

a. Perianal disease b. Fistula in ano
c. Anorectal abscess d. Small bowel obstruction

Indications of surgery in crohn's disease:

1. *Failure of medical treatment.*
2. *If patient can't be weaned off systemic steroids even after 6 months.*
3. *Intestinal obstruction = most common indication.*
4. *Fistula formation, bleeding, malignant change*
5. *Perforation, Fulminant colitis*
6. *Perianal problems*
7. *Crohn's disease children with growth retardation.*

Surgery is to correct complications, doesn't cure the disease.

Ref: SRB's Manual of Surgery 5th edition, pg 868

33. **A 3 month old baby can**

a. Fixate on an object at 15 cm
b. hold head erect
c. sit with support
d. roll over

- *At birth, a baby can fixate and follow a moving person or dangling ring held 8-10 inches away upto a range of 45°.*
- *At 3 months, baby can hold his head erect steadily on being pulled to sit.*
- *Sits with support of pillows at 5 months and in tripod fashion at 6 months*
- *Can roll over at 5 months*

Ref: OP Ghai Essentials of Pediatrics 8th edition, Pg 53

34. **Which of the following shifts O_2–Hb** to left

a. Acidosis b. Hypercarbia
c. Hypoxia d. Fetal hemoglobin

Factors that shift O_2–Hb dissociation curve to left:

↑O_2 affinity so ↓unloading

- *↓pCo_2*
- *↓$[H^+]$*
- *↓Temperature*
- *↓DPG*
- *↑PH*
- *Fetal Hb*

Factors that shift O_2–Hb dissociation curve to right:

↓O_2 affinity so ↑unloading

- *↑pCO_2, $[H^+]$, temperature, DPG*
- *↓p^H*
- *Sulf–Hb*

Ref: BRS Physiology 5th edition, Pg 126-127

31.a	Shallow breathing	32.d	Small bowel obstruction	33.b	hold head erect
34.d	Fetal hemoglobin	35.b	shift of O2–Hb dissociation ...	36.c.	ER+, PR+ HER2–
37.d	Vitreous humor	38.b	Increases		

37.d	Vitreous humor	38.b	Increases cerebral blood...	39.c	Staging of ovarian cancer
40.a	Mullerian agenesis	41.a	Avascular necrosis	42.a	Bony ankylosis

35.The effect of acidosis is

a. hypokalemia
b. shift of O_2–Hb dissociation curve-Bohr effect
c. acidity and heartburn
d. None

- *Acidosis means ↓pH; this shifts O_2–Hb dissociation curve to the right, decreasing O_2 affinity so ↑unloading.*
- ***Bohr's effect:** Hemoglobin's oxygen binding affinity is inversely related both to acidity and to the concentration of carbon dioxide.*

Ref: BRS Physiology 5th edition, Pg 126

36.Breast cancer with best prognosis is

a. ER+, PR+, HER2+ b. ER+ PR– HER2–
c. ER+, PR+ HER2– d. ER–, PR–, HER2–

ER+ PR+ HER2–aka Luminal A
- *73% of all breast cancer cases*
- *Best prognosis*
- *Most common subtype for every race, age and poverty level*

ER– PR– HER2–aka 'Triple negative'
- *13% of all cases*
- *Worst prognosis*
- *most common in non-Hispanic blacks*

ER+ PR+ HER2+ aka 'Luminal B'
- *10% of all cases*

ER– PR– HER2+ aka 'HER2 enriched'
- *5% of all cases*

Ref: cancer.gov

37.Alcohol detection from a putrefied body is done from

a. Stomach b. Liver
c. Blood d. Vitreous humor

- *In a decomposing body, due to bacterial production, alcohol level is altered in other samples and unreliable.*
- *Vitreous humor doesn't suffer such changes.*

Ref: The Essentials of Forensic Medicine, KSN Reddy 33rd edition, Pg 578

38.Halothane results

a. increases GI motility
b. increases cerebral blood flow
c. increases cerebral metabolism
d. pulmonary vasoconstriction upon hyper ventilation

Volatile anesthetic	*Cerebral blood flow*	*Cerebral metabolic rate*
Isoflurane	↑	↓
Sevoflurane	↑	↓
Halothane	↑↑↑	↓
Nitrous oxide	↑	↑

decreased, leading to EEG slowing and modest reductions in metabolic oxygen requirements.

Ref: Morgan and Mikhail's Clinical Anaesthesiology 5th edition, Pg 165

39.Rectal examination in gynecology is not done for

a. Rectal symptoms
b. Mullerian agenesis
c. Staging of ovarian cancer
d. differentiate rectocele &enterocele

- *Staging of ovarian cancer is done following laparotomy (staging laparotomy). Staging helps to assess prognosis as well as make a better choice of adjuvant therapy.*

Ref: DC Dutta's textbook of Gynecology 7th edition, Pg 305.

40.A female has breast and pubic hair but not uterus and vagina, she has

a. Mullerian agenesis
b. Androgen insensitivity syndrome
c. Klinefelter syndrome
d. Turner's syndrome

Mullerian agenesis: Mayer-Rokitansky-Houser Syndrome
- *Absence or hypoplasia of internal vaginal canal; may have absence of uterus & fallopian tubes*
- *Female karyotype, normal ovarian function, normal growth and development*
- *Ovaries are not mullerian structures*
- *The first sign of this condition is the failure to menstruate by the age of 15 to 18*
- *Pelvic USG and MRT can assess anatomic abnormality.*
- *Associated with urinary/renal tract abnormalities, skeletal (spine) anomalies*

Androgen insensitivity syndrome:
- *Genotype XY*
- *Decreased public & axillary hair*
- *Intra-abdominal testicles*
- *Gonads removal recommended after puberty due to increased risk of malignancy.*

Turner's syndrome: Genotype 45, XO
Klinefelter's syndrome: Genotype: 47, XXY

Ref: DC Dutta's Textbook of Gynecology, 6th edition, pg 44

41.Which of these is not a complication of intertrochanteric fracture of femur?

a. Avascular necrosis b. Malunion
c. Shortening of limb d. Osteoarthritis

Intertrochanteric fracture occurs along a line between greater trochanter & lesser trochanter.
- *Totally extracapsular*
- *Seen in elderly patients and more in females*

40.a	Mullerian agenesis	41.a	Avascular necrosis	42.a	Bony ankylosis
43.b	Fever with chills	44.a	apparent & inapparent...	45.b	β-hemolytic streptococci

C/F: Pain, marked shortening of the lower limb, complete external rotation deformity, swelling, ecchymosis & tenderness over the greater trochanter.

Complications: *Due to cancellous nature of bone, heals well unlike fracture neck of femur.*

- *Malunion is quite common*
- *Coxa vara,non-union (<2%)*
- *Traumatic osteo arthritis*

Note: avascular necrosis is seen in fracture of neck of femur.

Ref: Essential Orthopaedics, Maheshwari 4th edition, pg 134-135

42.Pyogenic arthritis can lead to

a. Bony ankylosis b. Fibrous ankylosis
c. Pseudoarthrossis d. None

- *Though fibrous ankylosis can precede bony ankylosis, 'a' is a better choice as pyogenic arthritis is more recognised to be a common cause for bony ankylosis besides pott's spine.*

Ref: Essentials of Orthopaedics, Maheshwari 5th edition, Pg 177

- *Tom smith arthritis = Septic arthritis of hip hoint seen in infants.*
- *Sites of septic arthritis in i.v. drug abusers:*
  a. *Sacroiliac joint*
  b. *Pubic symphysis*
  c. *Sternal articulations.*
- *In nail pricks, pseudomonas aeruginosa is the organism, the most common site is the second metatarsophalangeal joint.*

43.Most common manifestation of hemolytic transfusion reaction in a mismatched blood transfusion is:

a. Decreased urine output
b. Fever with chills
c. Flank pain
d. Jaundice

- *Rapid hemolysis of as little as 10ml of incompatible blood can produce symptoms of an acute hemolytic transfusion reaction.*
- *The most common presenting symptom is fever with or without chills or rigors.*
  a. *Mild reaction – abdominal, chest, flank or back pain*
  b. *Severe reaction – hypotension, dyspnea, flank pain, shock with or without accompanying DIC, red urine.*
- *Risk: 1 in 38,000 units transfused*

Ref: Morgan and Mikhail's Clinical Anesthesiology 5th ed., Pg 1172

44.Iceberg phenomenon represents

a. apparent &inapparent infection
b. symptomatic & asymptomatic
c. diagnosed & undiagnosed
d. diseased &undiseased

- *The tip of the iceberg →What the clinicians see*
- *Submerged → Part explored & made visible by the epidemiologists*
- *Diseases with visible tip ⇒ Tetanus, Anthrax, Rabies*

Ref: Review of Preventive & Social Medicine Vivek Jain 7th edition, pg 59-60

45.Skin grafting is absolutely centra indicated in infection with

a. Pseudomonas b. β-hemolytic streptococci
c. Staph aureus d. E. coli

- *β-hemolytic streptococcal infection is a contraindication for skin grafting. One of pre requisites for skin grafting is beta hemolytic streptococci load less than 10^5 per gram of tissue.*

Ref: SRB's manual of surgery 5thed, Pg 321

- *Skin graft can't be placed over unhealthy granulation tissue, bone without periosteumand cartilage without perichondrium.*
- *Autograft: On the same patient*
- *Isograft: Genetically identical twins*
- *Allograft:Genetically different members; but within a species*
- *Xenograft: Different species.*

Answer

31.a	Shallow breathing	32.d	Small bowel obstruction	33.b	hold head erect
34.d	Fetal hemoglobin	35.b	shift of O2-Hb dissociation ...	36.c.	ER+, PR+ HER2-
37.d	Vitreous humor	38.b	Increases cerebral blood...	39.c	Staging of ovarian cancer
40.a	Mullerian agenesis	41.a	Avascular necrosis	42.a	Bony ankylosis
43.b	Fever with chills	44.a	apparent & inapparent...	45.b	β-hemolytic streptococci

46."Black death" is due to

a. Anthrax b. Bubonic plague
c. Malaria d. Cholera

- *Black Death is a pandemic that ravaged Europe between 1347 and 1351.*
- ***Cause:*** *Plague (Yersinia Pestis)*
  - *About 25 million people died in Europe from the plague during the Black Death.*

Ref: Bubonic Plague: The Black Death by Stephen Person

47.Most important factor for Fracture healing is:

a. Hematoma organization
b. Immobilisation
c. Traction
d. Pain management

46.b.	Bubonic plague	47.b.	Immobilisation	48.c.	Meta-tarsal
49.a.	1/1000	50.b.	Cholestyramine	51.c.	Trichomonas vaginalis

➲ *The same question was asked previous year. Please look at the explanation written.*

48. March fracture most commonly affects

a. Tibia
b. Femur
c. Meta-tarsal
d. Fibula

➲ *"March Fracture" is a term applied to a fracture occurring typically in infantry recruits during training periods involving a great deal of marching.*
- *aka stress/fatigue fracture*
- *They occur due to repeated concentrated trauma to a normal bone, classically the 2nd metatarsal of the foot but can occur in other weight bearing bones of the lower limb and pelvis.*

Ref:Apley's System of Orthopaedics and Trauma, 9th edition, Pg 463

49. In a population of 2000, 10 got a disease in the first year and the same number the next year calculate the prevalence

a. 1/1000
b. 2/1000
c. 4/1000
d. 10/1000

➲ *Prevalence = Incidence × Duration*

➲ *So, prevalence = $\frac{10}{2000} \times 2 = 1/1000$.*

Ref: Review of Preventive & Social Medicine Vivek Jain 7th edition, Pg 96

50. A man presents with loose watery stool without fever. He had undergone ileal resection & completed ATT course for TB stricture 2 years back. What is appropriate management?

a. Metronidazole
b. Cholestyramine
c. Repeat ATT
d. Codeine

➲ *As the patient had undergone ileal resection, he has bile acid malabsorption. These bile acids in the intestinal lumen stimulate electrolyte and water secretion, which results in loose to watery stools.*

➲ *These patients respond very well to bile acid binders like cholestyramine.*

➲ *In more severe bile acid malabsorption, steatorrhea is seen. This group of patients is best treated with a low fat diet supplemented with medium-chain triglycerides.*

51. A young female of 23 presents with yellow vaginal discharge and itchiness. The organism was een on wet mount of the discharge. Identify the organism:

a. Gardnerella vaginalis
b. Candida albicans
c. Trichomonas vaginalis
d. Chlamydia trachomatis

	Color	PH	Pruritus	Wet mount
Trichomoniasis	Greenish yellow	≥4.5	+++	Motile organisms
Candidiasis	Curdy white	<4.5	++	Hyphae & buds
Bacterial Vaginosis	Gray white to green yellow	≥5	Non-irritating	Clue cells
Chlamydia	Mucopurulent	<4.5	–	Not seen

Ref: *DC Dutta's textbook of Gynecology, 7th edition, Pg 134*

52. HIV positive patient with CD_4 count <90/HL develops sputum positive pulmonary TB. What is appropriate next step?

a. Isoniazid & Rifampin
b. Isoniazid, Rifampin, Pyrazinamide, Ethambutol & Streptomycin
c. Isoniazid, Rifampin, Ethambutol, Pyrazinamide and Antiretroviral therapy
d. No treatment

➲ *New HIV/AIDS treatment guidelines recommend use of antiretroviral regimen irrespective of CD_4 count or stage of disease. Since CD_4 count <90/μL, the person is at high priority of antiretroviral regimen.*

➲ *Since the patient has now developed sputum positive TB, Anti-tubercular treatment needs to be initiated with 4 first line drugs "Intensive phase".*

53. Compensation in medical malprasciss is under

a. Muluki: Ain IlaajGarneko Mahal
b. Consumer Protection Act
c. Nepal's Constitution
d. ICU guidelines

➲ ***"Muluki Ain: IlajGarneko Mahal"*** *states about compensation regarding medical malpraxis. But the points stated seem so irrelevant in the context of our country.*

54. A solider while marching fell on ground and was hit on chin. What is the likely fracture he would sustain?

a. Zygomatic fracture
b. Symphysis menti and condyle
c. Both condyles
d. Parasymphyseal fracture

➲ *Fall upon chin most commonly results symphyseal fracture which has a high chance of associated unilateral or bilateral condylar fracture.*

55. An old man is diagnosed to have carcinoma of pancreas. In his body cells, which phenomenon is not prominent?

a. Apoptosis
b. Autophagy
c. Necrosis
d. None

➲ *One of the hallmarks of cancer is the ability of malignant cells to evade apoptosis.*

Ref: *biooncology.com*

49.a.	1/1000	50.b.	Cholestyramine	51.c.	Trichomonas vaginalis
52.c.	Isoniazid, Rifampin, ...	53.a.	Muluki: Ain IlaajGarneko...	54.b.	Symphysis menti and condyle

56. The most common organism associated with AOM is:

a. Adenovirus
b. Respiratory Syncytial Virus
c. Corona virus
d. Rhino virus

➲ *Acute otitis media: Microbiology*
1. ***Bacteria:*** *Streptococcus pneumoniae*
   Non typeableHemophilusinfluenzae
2. ***Viruses:*** *Respiratory syncytial virus*
   Picorna viruses (eg; Rhinovirus, enterovirus)
   Influenza, Adeno virus
   Others:*Mycoplasma pneumoniae*
   Chlamydia trachomatis

Ref: UpToDate

57. In which of the following condition, uridine glucoronosyl transferase enzyme is deficient?

a. Gilbert syndrome
b. Rotor syndrome
c. Criggler-Najar syndrome
d. Dubin-Johnson syndrome

➲ ***Gilbert's syndrome:***
- *Decreased production of glucoronyl transferase*
- *Rare autosomal dominant trait*
- *More common in men*
- *Usually asymptomatic hyper bilirubinemia*
- *Liver function tests are normal.*

➲ ***Crigler-Najjar Syndrome:***
- *Low activity of glucoronyl transferase (conjugating enzyme)*
- *Rare inherited disease*
- *Severe hyperbilirubinemia in neonates (unconjugated)*
- *Kernicterus, early death.*

➲ ***Dubin-Jonhnson Syndrome:***
- *Defect in transfer of conjugated bilirubin into the biliary canaliculi*
- *Conjugated hyperbilirubinemia*

➲ ***Rotor syndrome:***
- *Conjugated hyperbilirubinemia*
- *Problem in excretion of bilirubin*

Ref:Textbook of Biochemistry for Medical Students by DM VASUDEVAN

58. A child is with bilateral 3.5 D refractive error. Which is most likely to be the cause of isometric amblyopic?

a. Myopia
b. Hyperopia
c. Astigmatism
d. Cataract

➲ *Since the child only has spherical correction, astigmatism is ruled out. Out of hyperopia and myopia, hyperopia is more likely to result isometric amblyopia.*

59. A young girl had menarche at 13. Now she is 15 and is complaining about excessive vaginal bleeding. What is the most likely cause?

a. Sarcoma botryoides
b. Fibroid
c. Cervical polyp
d. Simple endometrial hyperplasia

➲ *Endometrial hyperplasia occurs due to unopposed estrogenic stimulation. At such a young age, menstrual cycles are anovulatory. Due to which, endometrial lining becomes thickened due to the effect of estrogen alone.*

Ref: DC Dutta's Textbook of Gynecology 7th edition

60. Vitelline vein forms

a. Ligamentum vanosum
b. Ligamentum teres
c. Portal vein
d. Sueriorvenacava

➲ *In the fifth week of intrauterine life, three pairs of major veis can be distinguished*
- *Vitelline veings, or omphalomesenteric veins, carrying blood from the yolk sac to the sinus venosus*
- *Umbilical veins, originating in the chorionic villi and carrying oxygenated blood to the embryo*
- *Cardinal veins, draining the body of the embryo proper*

➲ *Vitelline veins contribute to the hepatic sinusoids, hepato-cardiac portion of the inferior venacava, prrtal vein and superior mesenteric vein*

Answer

46.b.	Bubonic plague	47.b.	Immobilisation	48.c.	Meta-tarsal
49.a.	1/1000	50.b.	Cholestyramine	51.c.	Trichomonas vaginalis
52.c.	Isoniazid, Rifampin, ...	53.a.	Muluki: Ain IlaajGarneko...	54.b.	Symphysis menti and condyle
55.a.	Apoptosis	56.b.	Respiratory Syncytial Virus	57.a.	Gilbert syndrome
58.b.	Hyperopia	59.d.	Simple endometrial ...	60.c.	Portal vein

61. Scanty painless foul smelling discharge from the ear is associated with?

a. mastoid abscess
b. acute mastoiditis
c. Cholesteatoma
d. foreign body ear

➲ *Cholesteatoma is a tissue growth which contains keratinisingsquamous epithelium and is located in the middle ear or in the mastoid cavity.*

There are 2 types of cholesteatoma:

a. ***Acquired:*** *Caused by any pathology in the middle ear cavity leading to keratin accumulation. They are associated with TM pathology.*
b. ***Congenital:*** *They are present since birth and are epidermal cysts in the middle ear cavity. They are associated with normal tympanic membrane.*

61.c	Cholesteatoma	62.b	sphenoidal [illegible] cth	63.a	Short acting harmones
64.a	Short acting hormones	65.c	Giant cell tumor	66.a	methylmalonic acid
	Neurofibrillary	68.a	Meta[illegible]		

– *Presence of cholesteatoma is always suggestive of atticoantral type of chronic suppurative otitis media. The 2 types of CSOM can be distinguished by the nautre of discharge as:*

COM-Squamous	COM-Mucosal
Scanty	Profuse
Painless	Also painless
Foul smelling	Not foul smelling

- *Mastoid abscess, acute mastoiditis and FB ear are all painful*
- *Mastoid abscess and acute mastoiditis rarely present with otorrhea.*

Ref:Textbook of ENT and Head and Neck Surgery Shrivastav 2nd edition PN 52

62. Which of the following is the most common site of sinusitis in children?

a. frontal sinus b. ethmoidal sinus
c. maxillary sinus d. sphenoidal sinus

- *Only 2 sinusesare present at birth: Maxillary sinus and Ethmoidal sinus (Anterior & posterior group) sphenoid sinus appears at 4 years of age and frontal sinus at 6 years of age.*
- *As ethmoidal air sinus is made up of complex bony labyrinth of thin walled cells, it is more prone to develop infection in children.*
- *The groups of ethmoidal air cells drain into superior meatus (posterior group) and middle meatus (anterior group).*
- *As the ethmoidal sinuses are very closely related to meninges superiorly and orbit laterally, infection to ethmoidal sinuses may travel to cause meningitis or orbital cellulitis in children, this being one reason as to why meningitis is more common in children.*
- *Heller cells are infraorbital ethmoidal air cells lateral to the lamina papyracea (papery thin bone separating ethmoidal cells from orbit).*

Ref:Textbook of ENT and Head and Neck Surgery Shrivastav 2nd edition PN 118

63. Which of the following arteries is embolized in the management of refractory epistaxis in a case of angiofibroma? Options have been typed wrongly

a. Short acting harmones
b. Stored in plasma extracellularly
c. active on extracellular receptois
d. derived from amino acid phenylalanine

- *The main supply to an angiofibroma comes from the internal maxillary artery and sometimes from ascending pharyngeal or vidian artery.*
- *Maxillary artery is a terminal branch from external carotid artery which arises behind the neck of the lower maxilla (i.e. mandible) – It has 3 parts: mandibular, pterygoid and pterygomaxillary portion. Middle meningeal artery (MC site of bleed in EDH) arises from mandibular portion and internal maxillary artery (to be ligated in nasopharyngeal angiofibroma) comes from pterygomaxillary portion.*

Anterior and posterior ethmoidal arteries supply the septum color lateral nasal wall but not an angiofibroma.

- *Ligation of internal maxillary artery for epistaxis control is done within the pterygopalatine fossa.*
- *Greater palatine artery is another branch of maxillary artery that supplies the hard palate & nasal septum but not the angiofibroma tissue.*

Ref: Diseases of Ear, Nose and Throat and Head and Neck Surgery, Dhingra 6th edition PN 280

64. Thyroid hormones are:

a. Short acting hormones
b. Stored in plasma extracellularly
c. active on extracellular receptors
d. derived from amino acid phenylalanine

- *Thyroid hormones are short acting hormones: TSH is also a short acting hormone.*
- *Thyroid hormones are stored extracellulary in thyroid follides; but not in plasma.*
- *Thyroid hormones, being steroid hormones, act via intracellular nuclear receptors which contain TRH (Thyroid Response Element).*
- *Thyroid hormones are derived from amino acid tyrosine.*

Ref: BRS Physiology 6th edition PN 234

65. Which of the following bone tumors is uncommon before the age of 20 years?

a. osteosarcoma b. Osteochondroma
c. giant cell tumor d. Ewing's sarcoma

- *As giant cell tumor is a tumor of epiphysis and epiphyseal fusion will not have occurred before the age of 20 years, it is uncommon to see giant cell tumor before 20.*
- *The most common bone tumors according to age are:*

1st decade: Ewing's sarcoma
2nd decade: Osteosarcoma
After skeletal maturity: Giant cell tumor
Usually occurs at the age of 20 years
After 40 years: metastasis

Ref: A textbook of Orthopedics Maheshwori 5th edition PN 237

66. Which of the following compounds is accumulated in a case of megaloblastic anemia?

a. methylmalonic acid b. succinylcoA
c. tetrahydrofolic acid d. pyrimidine phosphate

Methylmalonyl COA —(isomerization rxn, enzyme methyl malonyl COA mutase)→ *Succinyl COA*

- *The enzyme here requires a prosthetic group (adenosylcobalamin) which is formed from cynacobalamine (vit. B12).*
- *Hence, in a deficiency of vit. B12, there are increased plasma and urine levels of methylmalonic acid, which is*

64.a	Short acting hormones	65.c	Giant cell tumor	66.a	methylmalonic acid
67.a	Neurofibrillary tangles	68.a	Metformin	69.b	Clofazimine
70.a	i.v. Calcium gluconate	71.b	Pulmonary collapse and ...	72.b	Compulsion
	Insulin	74.d			

E Easy Entry

67.a	Neurofibrillary tangles	68.a	Metformin	69.b	Clofazimine
70.a	i.v. Calcium gluconate	71.b	Pulmonary collapse and ...	72.b	Compulsion
	Insulin	74.d	Prolactin		

incorporated into fatty acids leading to abnormal myelin formation and causing neurological manifestations.

- Option 'c', i.e. tetrahydrofolic acid is also a product involved in DNA synthesis and requires vit. B12. However, the levels of tetrahydrofolic acid are decreased in vit. B12 deficiency.

Ref: Robbins and Cotran pathologic basis of disease 8th edition PN 657

67. A 68 years old man died of severe Alzheimer's disease. On autopsy of brain, which of the following features is the most likely to be seen?

a. Neurofibrillary tangles
b. Lewy body formation
c. Pannus formation
d. Negri bodies

- *Pathological features of Alzheimer's disease include: @ PANT*
  - i. *Plaques: extracelluar - made up of AB amyloid*
  - ii. *Amyloid angiopathy: accumulation of AB amyloid in arterioles*
  - iii. *Neurofibrillary Tangles: Cytoplasmic silver staining inclusions which represent abnormally phosphorylated Tau-protein*
- *Lewy bodies are eosinophilic cytoplasmic inclusions in substantia nigra that are seen in Parkinson's disease.*
- *Pannus is hypertrophied synovium seen in Rheumatoid Arthritis.*

Ref: Robbins and Cotran pathologic basis of disease 8th edition PN 1314

68. Concerns are raised when a 64 year female patient has been recently diagnosed with type 2 DM and is going to be started on oral hypoglycemic agents. Which of the following anti-hyperglycemic agents is least likely to lead to hypoglycemia?

a. metformin b. glyburide
c. chlorpropamide d. insulin

- *Metformin is a biguanide which decreases hepatic production of glucose.*
- *Drugs that act as insulin secretagogues (sufonyloureas: Chlorpropamide, glibenclamide, glyburide) or insulin sensitizers (thiazolidinediones) mimic the action of insulin (which itself causes hypoglycemia), thereby leading to hypoglycemia.*
- *Acarbose (α-glycosidase inhibitor) does not lead to hypoglycemia.*

Ref: Davidson's Principles and Practice of Medicine 22nd Edition PN 822

69. Which drug used in the treatment of leprosy has been found to be associated with red-brown pigmentation of skin?

a. Dapsone b. Clofazimine
c. Rifampicin d. Dexamethasone

- ***S/E of anti-leprosy drugs:***
  - *Clofazimine: skin discoloration, ichthyosis, conjunctival and corneal pigmentation.*
  - *Dapsone: Hemolysis, methemoglobinemia, agranulocytosis*
  - *Rifampicin: Facial flushing orange discoloration of urine and other body secretions.*
  - *Ofloxacin: Prolonged QT interval, torsadesde pointes.*
  - *Minocycline: Anemia, thrombocytopenia, conjunctival discoloration.*
- ***Drug causing hyperpigmentation:***
  - *Photosensitizing drugs*
  - *Amiodarone*
  - *ACTH*
  - *Gold*
  - *Estrogens and progesterone*
  - *Hydroxychloroquine*

Ref: KD Tripathi Essential Pharmacology 7th edition PN 782

70. Which is the fastest effective treatment of hyperkalemia?

a. i.v. calcium gluconate
b. i.v. insulin & dextrose
c. i.v. sodium polystyrene
d. hemodialysis

- *Features of alteration in K^+ levels:*

	Clinical Features	ECG changes
Hypokalemia	Arrhythmias, weakness	U waves, flat T waves
Hyperkalemia	Arrhythmias, weakness	Wide QRS & peaked T waves
@ Remember	Twaves magnitude α $[K^+]$	(i.e. KT)

- *Management of hyperkalemia*
  - a. *i.v. calcium gluconate → stabilizes myocardium, therapy preevnting arrhythmias*
  - b. *i.v. dextrose and insulin → Insulin shifts K^+ Inside the cells; dextrose is added to prevent hypoglycemia.*
  - c. *K^+ binding renins: Like sodium polystyrene are given to increase g.i. binding to postassium and increase excretion of potassium.*
  - d. *i.v. $NaHCO_3$: Creation of alkaline environment also shifts K^+intracellularly*

Ref: Davidson's Principles and Practice of Medicine 22nd Edition PN 442

71. Which is the most common complication after esophagectomy?

a. Recurrent laryngeal nerve palsy
b. Pulmonary collapse & hypoxia
c. arrhythmias
d. Hemorrhage

- *Atelectasis occurs in 3% of cases (most common) and leads to hypoxia. It may require prolonged positive pressure ventilation.*
- *Post-operative hemorrhage can be mediastinal or intraperitoneal.*
- *As the recurrent laryngeal nerve innervates the upper esophageal sphincter and is located in the tracheo-esophageal groove,injury to RIN may also occur as a complication of esophagectomy.*
- *Other complications include cervical esophagogastric anastomotic leakage, gastric tip necrosis and rarely, chylothorax.*

Ref:https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3693150/

72.A 22 years female comes to OPD. She is a student & she has a habit of reading all the paragraphs of a book to make sure that she hadn't missed anything while reading it previously. What is this psychopathology known as?

a. Obsession
b. Compulsion
c. altruism
d. denial

- *Obsession: Any intriguing thought, belief, feeling or sensation, that causes severe distress, which are partially relieved by the performance of repetitive actions that are performed by the individual to get rid of obsession even though the individual realises the irrationality of them.*
- *These behaviors are inconsistant with one's own beliefs and attitudes.*
- *Denial is actually the avoidance of awareness of some painful anxiety.*
- *Altruism is the process of alleviating negative feelings via unsolicited generosity that provide satisfaction.*

Ref: A short textbook of Psychiatry, Ahuja, 7th edition PN 95

73.Which of the following doesn't act on intracellular receptors?

a. thyroid hormones
b. vit. D
c. Steroid
d. Insulin

- *Insulin is a non-steroidal (polypeptide) hormone that being lipophobic, cannot diffuse through the cell membrane and so, binds to an extracellular receptor which acts via JAK-STAT pathway.*
- *Steroid hormones (thyroid hormones, vit. D. Steroids) are lipophilic and diffuse thorugh the cell membrane to act in a nuclear or cytoplasmic receptor.*
- *However, steroid hormones are also hydrophobic and so must circulate bound to specific globulins thereby increasing their solubility.*
- *Hormones with intracellular receptors are: Progesterone, Estrogen, Testosterone, Cortisol, Aldosterone, T3/T4, vitamin D.*

Ref: BRS Physiology 6th edition PN 229

74.A 32 years female presents with bitemporal hemianopia, oligomenorrhea and galactorrhea. What will be your provisional diagnosis?

a. Acromegaly
b. Empty sella syndrome
c. Cushing disease
d. Prolactin secreting macroadenoma

- *The presence of bitemporalhemianopia suggests that the lesion is affecting the optic chiasma in the visual pathway. As the pituitary in the sella lies very close to optic chiasma, a mass (most commonly a macroadenoma) arising from pituitary could be a cause of these features.*
- *As patient is also presenting with features suggestive of hyperprolactinemia (oligomenorrhea&galactorrhoea), prolactin secreting macroadenoma is the most likely cause.*
- *Cushing disease is characterized by features of pituitary adenoma (bitemporal hemianopia, headache) along with features of hypercortisolism (osteoporosis, striae, easy infections).*
- *Empty sella syndrome is very less likely to have bitemporal hemianopia. Moreover, it presents with features of hypopituitarism.*

Ref: Davidson's Principles and Practice of Medicine 22nd Edition PN 788

75.Which is the most common presentation of nasopharyngeal carcinoma?

a. anosmia
b. epistaxis
c. Acute Otitis Media
d. Cervical lymphadenopathy

- *The clinical presentations of nasopharyngeal carcinoma can be classified as follows:*
  a. *Nodal: Swelling in the neck, often bilateral (most common)*
  b. *Nasal: Nasal discharge, recurrent epistaxis, nasa obstruction*
  c. *Otological: Unilateral hearing impairment*
  d. *Neurological: Symptoms related to CN III to VI and I to XII*
  e. *Orbital: Diplopia, protrusion of eyeball, blurring vision.*
- *Most common presentation of oropharyngeal carcinom is: throat discomfort & pain*
- *Most common presentation of hypopharyngeal carcinom is: feeling of lump in throat*
- *Most common presentation of laryngeal carcinoma is:*
  Glottic → hoarseness
  Supraglottic → throat discomfort
  Subglottic → progressive dyspnea

Ref: Textbook of ENT and Head and Neck Surge Shrivastav 2nd edition PN 225

Answer

61.c	Cholesteatoma	62.b	~~sphenoidal~~ sinus ethmoidal	63.a	Short acting harmones
64.a	Short acting hormones	65.c	Giant cell tumor	66.a	methylmalonic acid
67.a	Neurofibrillary tangles	68.a	Metformin	69.b	Clofazimine
70.a	i.v. Calcium gluconate	71.b	Pulmonary collapse and ...	72.b	Compulsion
73.d	Insulin	74.d	Prolactin secreting ...	75.d	Cervical lymphadenopathy

76. Which is an abnormal finding in a 35 year old healthy asymptomatic male?

a. 2-3 epithelial cells/HPF
b. 5-6 RBC's/HPF
c. 3-4 pus cells/HPF
d. none

- *Presence of gross or microscopic hematuria in an asymptomatic male is always abnormal.*
- *Presence of few RBC's in urine in female may sometimes be normal, especially if the sample is taken in menstrual or immediate post-menstrual period.*

77. Which is not a component of tetralogy of fallot?

a. LV hypertrophy
b. Ventricular septal defect
c. Pulmonary stenosis
d. Overriding of Aorta

- *Components of Tetralogy of Fallot: Ventricular septal defect, pulmonary stenosis, Right ventricular hypertrophy and overriding aorta.*
- *Pentalogy of fallot = TOF ⊕ ASD*
- *Tetralogy of fallot is characterized by cyanotic spells: with the cyanosis being relieved by assuming a squatting position.*
- *Most common CHD = VSD*
- *Most common cyanotic CHD = TOF*
- *Blalock-Taussing shunt is used in the management of TOF*
- *TOF is caused by anteriosuperior displacement of the interventricular septum.*

Ref: First Aid 2018 PN 294

78. In which week of embryonic life does lungsdevelopment occur?

a. 1st week of life
b. 2nd week of life
c. 3rd week of life
d. 4th week of life

- *The development of lung occurs in 5 stages. The development starts from the protrusion of lung bud from distal end of respiratory diverticulum during week 4.*
- *Stages of lung development*

Stage	*Duration (weeks)*	*Development*
Embryonic	*4-7*	*upto tertiary bronchi*
Pseudoglandular	*5-17*	*upto terminal bronchioles*
Canalicular	*17-25*	*upto alveolar ducts*
Saccular	*26 weeks-birth*	*upto terminal sacs*
Alveolar	*36 weeks-8 years*	*upto adult alveoli*

- *Surfactant synthesis starats from mid-canalicular phase.*
- *Pneumocytes start developing from mid-canalicular phase.*

Ref: Langmann's Medical Embryology 12th edition PN 201

79. The correct sequence of correction of deformity in congenital TalipesEquinus Varus (CTEV) is:

a. Adductus-cavus-Equinus-varus
b. Cavus-Adductus-Equinus-Varus
c. Cavus-Adductus-Varus-Equinus
d. Equinus-Varus-Adductus-Cavus

- *CTEV (clubfoot) is a deformity characterized by inversion of hindfoot, adduction of forefoot and limited dorsiflexion.*
- *Equinus deformity occurs at the ankle joint and inversion (varus) occurs at the subtalar joint.*
- *Treatment of CTEV should begin as soon as possible after birth.*
- *In newborn, the foot should be manipulated by mother and Dennis Brown splint should be applied.*
- *Kite's procedure involves correction in the order of A→I→E (Adduction→Inversion→Equinus)*
- *Ponsetti's technique involves correction in the order of C→A→V→E (Cavus→Adductus→Varus→Equinus)*

Ref: A textbook of Orthopedics Maheshwori 5th edition PN 214

80. What is the name of the enzyme used for genetic mapping of eukaryotic cells?

a. DNA polymerase
b. Endonuclease
c. Telomerase
d. Ligase

- *Restriction endonuclease cleaves the genetic materials at specific sites into small fragments, which can later be used to identify the Loci of gene in DNA mapping.*
- *Telomerase is an enzyme that inserts a repeat sequence at the end of DNA or chromosome for protecting from DNA damage or fusion.*
- *DNA polymerase is an enzyme that synthesizes DNA molecules from existing DNA strands to create two new strands i.e. by adding nucleotides to 3' end of a DNA strand.*
- *DNA ligase catalyses the formation of a phosphodiester bond leading to the joining of DNA strands together.*

Ref: https://en.wikipedia.org/wiki/Restriction_enzyme

81. Which of the following is not a part of the clinical manifestations seen in congenital Rubella syndrome?

a. Cataract
b. SNHL
c. PDA
d. Arthritis

Sensorineural hearing loss (SNHL)

- *Congenital Rubella syndrome manifests as a triad of cataract, deafness and congenital heart disease (most common being PDA).*

76.d	5-6 RBC's / HPF	77.a	LV hypertrophy	78.d	4th week of life
79.c	Cavus-Adductus-...	80.b	Endonuclease	81.d	Arthritis

82.a	Cervix	83.c	Timely episiotomy as...	84.a	Supportive

- *It is also characterized by "blueberry muffin" rash.*
- *Remember: Arthritis is a manifestation of rubella infection in mothers but not in neonates.*
- *Features of CRS do not occur when rubella is contracted by the mother after 20 weeks of gestation.*

Ref: Essential Pediatrics OP Ghai 8th edition PN 272

82. Nabothian follicles are located in:

a. Cervix
b. vagina
c. uterus
d. Oviduct

- *Nabothian follicle is a mucus filled cyst on the cervix. It is formed when stratified squamous epithelium of the ectocervix grows over the simple columnar epithelium of the endocervix. This growth blocks the crypts of cervix and their outflow tracts thereby trapping their mucus secretions and leading to Nabothian cyst/ follicle formation.*
- *Bartholin gland is located most commonly at the junction of anterior 2/3rd of labia majora with the posterior 1/3rd at inner side.*
- *Gartner's cyst is located in anterolateral wall of vagina at 10 O'clock position.*

Ref: DC Dutta textbook of Gynecology 6th edition PN 268

83. Which of the following measures is not effective in preventing perineal tear in a vaginal delivery?

a. Slow delivery of head in between contractions
b. Effective perineal guarding
c. timely episiotomy as a routine
d. delivery by flexion of head

- *It is controversial whether routine episiotomy has got any major benefits (DC Dutta 9th ed. PN 528)*
- *Other options prevent perineal injury, episiotomy is itself a perineal injury.*

Ref: Sakshi Arora, Self Assessment and Review in Obstetrics 9th edition, PN 79

84. A 3 years child presented with fever of 103° F. On examination, tonsils are normal with slightly congested throat.Other systemic examinations are within normal limits. Which treatment measure would you prefer?

a. Amoxiclav and PCM
b. Supportive
c. Erythromycin
d. Benzyl penicillin

- *The history and examination suggest a viral etiology for pharyngitis. Hence the treatment is supportive.*
- *As the tonsils are normal, the diagnosis of acute tonsilitis or peritonsilar abscess are ruled out.*
- *As there is no any pseudomembrane or lymphadenopathy on examination of throat, the possible diagnosis of diphtheria is also ruled out. For suspected bacterial pharyngitis, Azithromycin is the drug of choice.*

Ref: Textbook of ENT and Head and Neck Surgery Shrivastav 2nd edition PN 227

85. Disproportionate short stature occurs due to:

a. Constitutional growth delay
b. Achondroplasia
c. Hypothyroidism
d. Growth hormone deficiency

- *It is an autosomal dorminant condition in which there is failure of longitudinal bone growth (endochondral ossification) resulting in short limbs.*
- *US: LS (Upper Segment: Lower Segment) ratio is used as the marker for proportionate or disproportionate short stature.*
- *Normal value of US: LS ratio is:*
  - *1.7 at birth*
  - *1.3 at 3 years*
  - *1.1 at 6 years*
  - *1 at 10 years*
  - *0.9 in adults*
- *Conditions where US: LS ratio is normal are causes of proportionate short stature: and conditions where this ratio is altered cause disproportionate short stature.*
- *Increase in US: LS ratio → Rickets, Achondroplasia, Untreated congenital hypothyroidism*
- *Decrese in US: LS ratio → Spondyloepiphyseal dysplasia, vertebral anomalies*
- *Besides these, genetic conditions such as Turner syndrome, Down syndrome, Prader-willi syndrome also lead to disproportionate short stature.*

Ref: Essential Pediatrics OP Ghai 8th edition PN 36

86. The histopathological finding of rapidly progressive glomerulonephritis is:

a. moon shaped fibrin and macrophage
b. "wire-looping' of capillaries
c. enlarged &hypercellular glomeruli
d. tram-track appearance of glomerular basement membrane

Type of GN	*Light microscopy*	*Immunofluorescence/ Electron microscopy*
Acute PSGN	*Enlarged, hypercellular glomeruli*	*Subepithelial immune complex humps*
RPGN	*Crescents of fibrin and plasma proteins with macrophages*	*Linear/ Pauci-immune or granular immunofluorescence*
Diffuse proliferative GN	*wire-looping of capillaries*	*Granular, subendothelial intramembranous Ig4 deposition*
IgA Nephropathy	*Mesangial proliferation*	*Mesangial IgA deposits*
Membrano proliferative GNH	*GBM splitting → tram-track appearance*	*GBM splitting → tram-track appearance*

Ref: Robbins and Cotran pathologic basis of disease 8th edition PN 921

85.b	Achondroplasia	86.a	moon shaped fibrin and ...	87.b	Renal
88.a	Expansion of costo-chondral..	89.d	Pro-NT-BNP	90.c	Breast carcinoma

87. A 23 years female has recently been diagnosed with SLE. Which of the following organ-system complications is she most likely to have throughout her life?

a. Hematological
b. Renal
c. Musculoskeletal
d. Neurological

- The most common organ system to manifest its complications in SLE is renal (lupus nephritis). Also, the most common cause of death in SLE patients is renal disease followed by infections and then by accelerated coronary artary disease.
- Grades of lupus nephritis:
  I: minimal mesangial LN
  II: mesangial proliferative LN
  III: focal proliferative LN (< 50% of glomeruli involved)
  IV: diffuse proliferative LN (≥ 50% of glomeruli involved)
  V: membranous LN
  VI: advanced sclerotic LN
- Most common and severe type of LN is diffuse proliferative.
- LN can present as nephritic or nephrotic syndrome.

Ref: Davidson's Principles and Practice of Medicine 22nd Edition PN 500

88. An 8 years child comes with weakness of limbs. His X-ray shows splaying & cupping of metaphysis of long bones. Which of the following X-ray findings is he also very likely to have?

a. Expansion of costo-chondral junction
b. Increase in joint space
c. Peri-articular osteopenia
d. Decrease in bone density

- The diagnosis in this 8 years old child is rickets.
- Rickets is a condition characterized by defective mineralization of cartilaginous growth plates: which occurs most commonly due to vitamin D deficiency.
- X-rays shows osteopenia and "Looser zones" (pseudofractures): It also shows widening of metaphyseal cupping/ splaying.
- Clinically, children have pathologic bow legs (gene varum), bead-like costochondral junctions (rachitic rosary) and craniotabes (soft skull).
- Lab features show: ↓ Vit D, ↓ Ca^{2+}, ↑ PTH, ↓ PO_4^{3-}, ↑ ALP

Ref: Essential Pediatrics OP Ghai 8th edition PN 114

89. Which of the following biomarkers cannot be used to predict the cardiovascular disease risk in a patient?

a. Homocysteine
b. LDH
c. Myoglobin
d. Pro-NT-BNP

- Accumulation of homocysteine in blood is a risk factor for arterial thrombus formation, hence it is a cardiovascular risk predictor.
- Myoglobin and LDH both are increased post MI, with levels being higher in severe coagulative necrosis.
- NT pro BNP is the biologically inactive from of BNP which is secreted by cardiomyocytes due to increased ventricular blood volume. Normal level of NT-pro-BNP helps to rule out chronic heart failure but elevated level of NT-Pro-BNP does not rule in the disease. So, it is not used as a cardiovascular risk factor.

90. The tumor that is most commonly associated with osteoblastic secondaries in the skull is:

a. Prostatic carcinoma
b. Adrenal carcinoma
c. Breast carcinoma
d. Renal cell careinoma

- Tumors associated with osteoblastic secondaries: prostate (leads to hypocalcemia), breast, uterus, ovary
- Tumors associated with osteolytic secondaries: kidneys (leads to hypercalcemia), lung, thyroid.
  - Most common malignancy of bone are secondary tumors.
  - Most common site for secondary tumor is the dorsal vestebrae.
  - Most common tumors for osteoblastic skull metastasis: breast > lung > prostate > lymphoma

Ref: A textbook of Orthopedics Maheshwori 5th edition PN 247

Answer

76.d	5-6 RBC's / HPF	77.a	LV hypertrophy	78.d	4th week of life
79.c	Cavus-Adductus-...	80.b	Endonuclease	81.d	Arthritis
82.a	Cervix	83.c	Timely episiotomy as...	84.a	Supportive
85.b	Achondroplasia	86.a	moon shaped fibrin and ...	87.b	Renal
88.a	Expansion of costo-chondral..	89.d	Pro-NT-BNP	90.c	Breast carcinoma

91. Irreversible injury to which intracellular organelle is necessary to confer irreversible damage to a cell?

a. Nucleus
b. Mitochondria
c. Golgi complex
d. Endoplasmic reticulum

- Though the reparative mechanism in a reversible cell injury is resynthesized in the Golgi apparatus and the rough endoplasmic reticulum, it is the mRNA signal from nucleus that activates these reparative mechanisms. Hence, an irreversible damage to the nucleus will result in a failure to activate these reparative responses thereby progressing the potentially reversible cellular injury to an inversible one.

Ref: Robbins and Cotran pathologic basis of disease 8th edition PN 14

92. What percentage of total calories must be derived from fats?

a. 15-20% b. 20-35%
c. 35-50% d. 50-60%

- The dietary composition should ideally be as follows:
  - Carbohydrates: 50-60%
  - Fat: 20-30%
  - Protein: 10-15%

93. The diagnosis of which disease requires the drawing of multiple blood samples from different sites?

a. Infective Endocarditis
b. Acute rheumatic fever
c. Septicemia
d. Cholangitis

- To diagnose endocorditis, the blood culture must be performed from 3 separate sets of blood samples obtained from a separate venipuncture site; at 0,30 and 60 minutes for acute IE; and 0,12 and 24 hours for subacute IE.
- Duke's criteria → Infective Endocarditis
- Jones criteria → Acute Rheumatic fever
- SLICC criteria → Systemic Lupus Erythematosus
- Tokyo guidelines → Cholecystitis / Cholongitis
- SOFA Score → Sepsis

Ref: Essential Pediatrics OP Ghai 8th edition PN 444

94. Which change occurs in retina when it is exposed to light?

a. Conversion of all-trans-retinal to cis-retinal
b. Conversion of retinal to retinol
c. Conversion of retinol to retinal
d. Conversion of cis-retinal to all-trans-retinal

- When light energy falls on rhodopsin, 11-cis-retinal gets isomerized into trans-retinal. This process, after a series of intermediates, activates a protein called transducin which activates phosphadiesterase enzyme.
- Receptor potential in eye is hyperpolarizing, not depolarizing.
- Rod cells are long and slender: Cones are small and conical.
- Color blindness is inherited as an X-linked recessive character.

Ref: BRS Physiology 6th edition PN 41

95. Providing education to school going children about personal hygiene is an example of:

a. Specific protection b. health promotion
c. Secondary prevention d. Tertiary prevention

Levels of prevention:

1. ***Primordial prevention:*** *Preventing the emergence of risk factors.*
   Best level of prevention for non-communicable diseases.

91.a	Nucleus	92.b	20-35%	93.a	Infective endocarditis
94.d	Conversion of cis-retinal to ...	95.b	Health Promotion	96.c	Peripheral nerve

occurred. It aims to halt the progress of disease at its incipient stage.

4. ***Tertiary prevention:*** *It is applied when disease has advenced beyond the early stage. Its primary aim is to reduce or limit disabilities.*
   - *Besides these specific protection are those that aim to prevent a specific disease and not all the diseases at a whole. eg. condoms for HIV.*
   - *Health promotion measures are those that aim to improve the general status of health of the community eg. awareness on menstrual hygiene.*

96. Which is the most common site for plexiform neurofibromatosis?

a. facial nerve b. trigeminal nerve
c. peripheral nerve d. optic nerve

- Neurofibroma is a benign tumor of nerve-sheath in the peripheral nervous system. It is of 2 major types: Dermal and Plexiform.
- Plexiform neurofibroma is an uncommon variant of peripheral nerves which arises from a proliferation of all neural elements.
- It has irregularly thickened, disforted and tortuous structure.
- Most common presentation of Neurofibromatosis type 2 is bilateral aeoustic schwannomas.
- Most common presentation of Neurofibromatosis type 1 is with cafe-au-lait spots and cutaneous neurofibromas.

Ref: Bedside Clinics in Surgery Makhan Laal 2nd edition PN 387

97. Maximum concentration of cone cells is found in:

a. Fovea centralis b. Macula lutea
c. Blind Spot d. none of the above

- The macula is an oval-pigmented area near the center of retina. It is antomically composed of 2 or more layers of ganglion cells. It is yellow in color and thus, absorbs excess blue and ultraviolet light that enter the eye, acting as a natural sunblock. It has 4 zones: fovea, foveal avasacular zone, foveola and umbo.
- The fovea centralis is a small pit, the photoreceptor layer of which has entirely cones and which is specialized for maximum visual acuity. Within the fovea is a central zone called foveal avascular zone which does not allow the loss or dispersion of light to occur. It is the only area in retina where 20/20 vision is attainable, and is the area where fine detail and colourcan be distinguished.
- Blind spot is a point in the visual field that corresponds to the lack of light-detecting photoreceptor cells on the optic disc of the retina where the optic nerve passes thorugh the optic disc.

Ref: Parson's disease of the eye 21st edition PN 12

97.a	Fovea centralis	98.c	Antagonist	99.b	Combined OCP's

97.a	Fovea centralis	98.c	Antagonist	99.b	Combined OCP's

98. A ligand having affinity to a receptor but no intrinsic activity at the receptor is correctly known as:

a. agonist
b. Partial agonist
c. antagonist
d. none of the above

- Has affinity to receptor but no intrinsic activity → antagonist.
- Has affinity to receptor with suboptimal intrinsic activity → Partial agonist.
- Has affinity to receptor with full intrinsic actiivty → full agonist.

Ref: First Aid 2018 PN 230

99. Which is the ideal contraceptive for a newly married couple?

a. Condoms
b. Combined OCP's
c. IUD's
d. Depo-provera injection

- In a newly married couple. COCP's are the ideal contraceptive measures because of easiness in use, early return to fertility when desired and short duration of action. Besides, if the female is having any form of dysmenorrhea or dysfunctional uterine bleeding. COCP's help to regularize than as well.
- Condoms are not the contraceptive of choice as they are needed to be used on an everyday basis.
- Intrauterine devices are not preferred as they are generally intended to be kept for longer duration like 7-10 years. However, a nulliparous female is more likely to experience complicationswithIUDS than a multiparous female.
- Injection depo-provera is a good choice as it should be applied every 3 months. However, delay return to fertility and depo-amenorrhea are chief complications that may arise and so this is not the ideal contraceptives of choice.

Ref: DC Dutta textbook of Obstetrics 8th edition PN 630

100. Which is not an advantage of combination of levodopa with carbidopa?

a. reduces the required dase of levodopa
b. reduces the incidence of "on-off phenomenon"
c. reduces the extrapyromidal side effects
d. reduces the effect of dopamine on heart

- Levodopa is the precussor of dopamine which is converted to dopamine by the enzyme dopa decarboxylase in the CNS and in the peripheral blood as well carbidopa is the inhibitor of the enzyme dopa decarboxylase which itself does not enter into the CNS.
- Henceforth, it decreases the peripheral conversion of levodopa into dopamine thereby decreasing the level of dopamine in peripheral blood. Thus, lesser dose of levodopa is required to produce same concentration of dopamine in the CNS. Also, the effect of dopamine on heart (which is due to peripheral dopamine) is minimised. Similarly, the extrapyramidal side effects are reduced. On-off phenomenon are due to central actions of dopamine which is totally unaffected by the presence or absence of carbidopa.

Ref: Davidson's Principles and Practice of Medicine 22nd Edition PN 1196

101. Which is a contraindication of medical abortion using mifepristone & misoprostol?

a. Controlled bronchial asthma
b. Allergy to these drugs
c. STD'S like HIV/AIDS
d. Pregnancy of 7 weeks POG

- Misoprostol, being a prostaglandin, may sometimes exacerbate and lead to acute attacks of bronchial asthma. However, controlled bronchial asthma is not a contraindication to medical termination of pregnancy.
- Pregnancy of 12 weeks POG is preferably terminated by medical abortion.

Ref: DC Dutta textbook of Obstetrics 8th edition PN 579

102. A Laryngeal Mask Airway:

a. ensures an unobstructed airway
b. can be used in full-stomach patients
c. is not associated with laryngospasm
d. can be used in positive pressure ventilation

- As laryngeal mask airway is placed close to the base of tongue and over the laryngeal inlet, it does not effectively seal or separate the pharyngeal inlet from laryngeal inlet. Henceforth, chances of aspiration exist with LMA and so, it cannot be used in full-stomach patients.
- Also, using PPV with LMA will increase air volume and pressure in the alimentary canal thereby increasing the probability of aspiration.
- LMA, when placed in appropriate position, will prevent the backfall of tongue and thereby, ensure an unobstructed airway.

Ref: Short textbook of Anesthesia, Ajay Yadav, 5th edition PN 42

103. A 45 years female comes with thecomplains of progressive SOB & dry cough for the last 6 months. On examination, she has clubbing, central cyanosis and pedal edema. On chest examination, she has bilateral basal crackles & loud P_2. What is the most common cause of mortality in these patients?

a. Type II resp. failure
b. Pulmonary arterial HTN
c. Hypoxia
d. Anemia

- Progressive SOB and dry Cough, Cyanosis, Clubbing and Crackles (4C) in a middle aged woman suggest a diagnosis of interstitial lung disease.

97.a	Fovea centralis	98.c	Antagonist	99.b	Combined OCP's
100.b	Reduces the incidence of ...	101.b	Allergy to these drugs	102.a	Ensures an unobstructed ...
103.b	Pulmonary	104.a	Immediately	105.b	3

- *The most common cause of mortality in Interstitial Lung diseases patients is Pulmonary Arterial Hypertension.*
- *Presence of Loud P_2 is a sign that PAH is developing in this patient.*
- *Pulmonary hypertension is said to be present if the mean pulmonary artery pressure (Normal = 10 - 14 mm Hg) is more than 25 mm Hg. It cause severe respiratory distress → cyanosis and RVH → decompensated corpulmonale.*

Ref: Davidson's Principles and Practice of Medicine 22nd Edition PN 709

104. At what time after birth does foramen ovaleclose?

a. immediately b. 1-2 days
c. 1-2 weeks d. 1-2 months

- *At birth, as the lungs start functioning, the increase in O_2 concentration decreases the pulmonary vascular pressure and the left atrial pressure becomes higher than that of the right. This forces the septum primum against the septum secundum and thus, foramen ovale is closed functionally. Later on, anatomical closure occurs and leaves the remnant of the foramen ovale, the fossa ovalis.*
- *Time of anatomical closure:*
  1. *Umbilical vessels and ductus venosus → 2-3 months*
  2. *Ductus arteriosus → 1-3 months*
  3. *Foramen ovale → 6 months*

Ref: Langmann's Medical Embryology 12th edition PN 197

105. How many layers are there in tear film?

a. 2 b. 3
c. 4 d. 5

- *There are 3 layers in the tear film:*
  - *a. mucus layer*
  - *b. aqueous layer*
  - *c. lipid layer*
  - ***a. Mucus layer:** It is the innermost layer that consists of mucin secreted by conjunctival goblet cells. It converts the hydrophobic corneal surface to a hydrophilic one.*
  - ***b. Aqueous layer:** It forms the bulk of the tear film which consists of the tears secreted by main & accessory lacrimal glands.*
  - ***c. Lipid (Oily) layer:** It is the outermost thinnest layer formed at the air-tear interface from the secretions of Meibomian, Zeis and Moll glands. It presents the overflow of tears, retards their evaporation and lubricates the eyelids.*

Ref: Parson's disease of the eye 21st edition PN 462

Answer

91.a	Nucleus	92.b	20-35%	93.a	Infective endocarditis
94.d	Conversion of cis-retinal to ...	95.b	Health Promotion	96.c	Peripheral nerve
97.a	Fovea centralis	98.c	Antagonist	99.b	Combined OCP's
100.b	Reduces the incidence of ...	101.b	Allergy to these drugs	102.a	Ensures an unobstructed ...
103.b	Pulmonary arterial ...	104.a	Immediately	105.b	3

106. Which type of cutaneous tuberculosis is paucibacillary?

a. Lupus vulgaris
b. Scrofuloderma
c. Tuberculous chancre
d. tuberculosis periorificialis

Classification of cutaneous tuberculosis:

a. Multibacillary:
- *Primary inoculation TB*
- *Scrofuloderma*
- *Tuberculosis periorificialis*
- *Acute miliary tuberculosis*
- *Gumma*

b. Paucibacillary:
- *Tuberculosis verrucosa cutis*
- *Lupus vulgaris*

Lupus vulgaris
- *Most common tubercular skin infection*
- *Nodular appearance; mostly on face and neck*
- *Histology shows well formed dermal granuloma with necrotic centers.*
- *As it is associated with moderate to high immunity, tuberculin test is positive.*

Ref: https://www.researchgate.net/figure/Classification-of-cutaneous-tuberculosis_tbl1_314168540

107. 100 mg of lignocaine is present in:

a. 100 ml of 1% solution b. 20% of 5% solution
c. 50 ml of 2% solution d. 10 ml of 1% solution

- *10ml of 1% solution*
  $= 10 \times \frac{1}{100} gm = 0.1\ gm = 100\ mg$
- *Restsofthe options give 1 gm as the weight of lignocaine.*

108. Which of the following muscles is not supplied by facial nerve?

a. Temporalis b. Zygomatic
c. Cervical d. LPS

- *Muscles of facial expression are supplied by the facial nerve.*
- *Muscles supplied by facial nerve:*
  - *Within facial canal:*
    - *Greater petrosal nerve*
    - *Nerve to stapedius*
    - *Chorda tympani nerve*
  - *At its exit from stylomastoid foramen:*
    - *Posterior auricular nerve*
    - *Digastric nerve*
    - *Stylohyoid nerve*
  - *Terminal branches:*
    - *Temporal nerve*
    - *Zygomatic nerve*
    - *Buccal nerve (Upper buccal and lower buccal)*
    - *Mandibular nerve*
    - *Cervical nerve*

106.a	Lupus vulgaris	107.d	10ml of 1% solution	108.d	LPS

- Levatorpalpebraesuperioris is supplied by CN III (Occulomotor nerve)

Ref: Bedside Clinics in Medicine, Kundu, 7th edition PN 496

109. Who is given the drug to be tested in phase II of clinical trial?

a. Small number of patients
b. Large number of patients
c. Healthy volunteers
d. Patients & animals

Phase	Tested upon	What is studied?
0	Non-human	does it have any effect?
I	healthy volunteers	is it safe?
II	Small number of pts	how well does it work?
III	large number of pts	if the treatment is better than standard treatment
IV	post-marketing surveillance	

110. Who gave the concept of id, ego & superego?

a. Sigmund Freud b. B. F. Skinner
c. Jean Piaget d. Leon Freud

- Id, ego and superego are the 3 interacting agents in the structural model of psyche as given by Sigmund Freud.
- Id = unco-ordinated instinct.
  (eg. feeling like "I want it now, any how")
- Super-ego = Moralizing and critically appraising reality
  (eg. feeling like "you can't have it/ It's not right")
- Ego=Organized, realistic part that mediates between the desires of the id & super ego.
  (eg. feeling like "I need to do a bit of planning to get it")
- Freud is also the author of "Interpretation of Dreams".

Ref: AShort textbook of Psychiatry Ahuja 7th edition PN 206

111. Which is the commonly used bedside test for snake envenomation?

a. activated partial thromboplastin time
b. prothrombin time
c. bleeding time
d. 20 minutes whole blood clotting test

- This test is done to assess the presence or absence of any coagulopathy after snake envenomation.
- 2 ml of venous blood is taken into a clean and dry glass tube: and is maintained upright, open and undisturbed for 20 minutes.
- After 20 minutes, the tube is inverted.
- If a solid clot is present and retained, it indicates normal coagulation.
- If the clot breaks down or if there is no clot, it indicates a consumption coagulopathy due to envenomation and anti-snake venom is to be administered.
- Other options given are not bedside tests but are laboratory investigations.

Ref:https://academic.oup.com/qjmed/article/106/10/925/1587782

112. A 30 years male presented with right sided headache which was periodic, reaching its peak and lasting for about 1 hour. The patient describes the pain as severe and was disturbing his work performance. What is your diagnosis?

a. Migraine b. cluster headache
c. Tension headache d. Meningitis

- Cluster headache is lateralized headache, most common at the age of 30-50 years with male preponderance. No hereditary factors are present. It begins without warning and reaches crescendo within 5 minutes. It is described as excruciating, deep, explosive type of pain that awakens the patients from sleep.
- Migraine headache are also lateralized frontotemporal headaches with female preponderance and positive family history. Pain is often proceded by aura, and lasts for several hours. It is usually throbbing type of headache. The onset is after awakening and relieved after sleep.
- Headache in meningitis is associated with fever, photophobia and toxic features.
- Tension headache: Constant pressure, bilateral, non-pulsating, not aggravated by physical activity, no nausea or vomiting, gets worse as the day passes.
- **Types of pain:**
  - Sinusitis: Pain is behind browbone or cheekbones
  - Cluster: Pain is around one eye
  - Tension: Painb like a band squeezing the head
  - Migraine: Pain, nausea and visual changes

Ref: Davidson's Principles and Practice of Medicine 22nd Edition PN 1177

113. Anti doublestranded DNA is highly specific for:

a. Systemic sclerosis b. SLE
c. Polymyositis d. Rheumatoid arthritis

- Anti dsDNA and anti Smith antibodies are specific for SLE.
- Anti histone antibodies: drug induced lupus
- Anti DNA topoisomerase B (scl-70) → systemic sclerosis
- Anti centromeric antibody → CREST syndrome
- Anti mitochondrial antibody → Primary biliary cirrhosis

Ref: Essential Pediatrics OP Ghai 8thedition PN 629

114. Commonest cause of death in peptic ulcer patients is:

a. Perforation b. Hemorrhage
c. Pyloric stenosis d. Malignancy

- Most common cause of death in peptic ulcer disease: bleeding
- Most common indication for surgery in peptic ulcer disease→ bleeding
- Most common source of bleeding → gastroduodenal artery
- Most common complication of peptic ulcer → bleeding
- Most common complication of gastric ulcer → Perforation

Ref: Bedside Clinics in Surgery Makhan Laal 2nd edition PN 119

109.a	Small number of patients	110.a	Sigmund Freud	111.a	20 minutes whole blood...
112.b	Cluster headache	113.b	SLE	114.b	Hemorrhage

115. Blighted ovum (silent miscarriage) is a sonographic finding in:

a. missed abortion b. threatened abortion
c. inevitable abortion d. completed abortion

Blighted ovum
- *seen in USG*
- *Said to be present if gestational sac of ≥ 3 cm has no fetal pole in it.*

Ref: DC Dutta Textbook of Obstetrics PN 188

116. What is the dose of zinc in a 12 month old child suffering from diarrhea?

a. 1 mg/10-14 days b. 10 mg/10-14 days
c. 15 mg/10-14 days d. 20 mg/10-14 days

Dose of zinc is:
- *2-6 months: 10 mg/day × 10-14 days*
- *≥ 6 months: 20 mg/day × 10-14 days*

Ref: Essential Pediatrics OP Ghai 8thedition PN 295

117. Pseudo-dementia is seen in:

a. Alcoholism b. Depression
c. Schizophrenia d. Mania

- *Pseudodementia → depression*
- *Hysterical pseudodementia (Ganser's syndrome) seen in prison inmates, characterized by approximate answer or vorbeireden.*

Ref: A Short textbook of Psychiatry Ahuja 7th edition PN 23

118. In lepromin test, the Fernandez reaction is read after:

a. 48 hours b. 72 hours
c. 24 hours d. 4 weeks

- ***Lepromin test:***

Intradermal injection of lepromin
↓
elicits 2 types of reactions

i. ***Early:*** *Tuberculin-like reaction known as Fernandez reaction in 48 hours*
ii. ***Late:***
- *Popular reaction known as Mitsuda reaction in 3-4 weeks.*
- *Late reaction is positive in tuberculoid leprosy and negative in lepromatous leprosy.*

Ref: https://en.wikipedia.org/wiki/Fernandez_reaction

119. The superior oblique muscle is supplied by:

a. CN III b. CN IV
c. CN V d. CN VI

- *@ LR6SO4 rest 3, i.e. Lateral Rectus → CN VI*
- *Superior Oblique → CN IV*
- *Rest of the extra ocular muscles → CN III*
- *Also supplies LevatorPalpabraesuperioris muscle*

Ref: Bedside Clinics in Medicine, Kundu, 7th edition PN 487

120. CVP is measured &recorded to know:

a. Right atrial pressure
b. Left ventricular pressure
c. Left atrial pressure
d. Right ventricular pressure

- *Central venous pressure → RA pressure*
- *Pulmonary capillary wedge pressure → LA pressure*

Ref: Bedside Clinics in Medicine, Kundu, 7th edition PN 371

Answer

106.a	Lupus vulgaris	107.d	10ml of 1% solution	108.d	LPS
109.a	Small number of patients	110.a	Sigmund Freud	111.a	20 minutes whole blood...
112.b	Cluster headache	113.b	SLE	114.b	Hemorrhage
115.a	Missed abortion	116.d	20 mg/10-14 days	117.b	Depression
118.a	48 hours	119.b	CN IV	120.a	Right atrial pressure

121. Which is cyanotic heart disease?

a. ASD b. VSD
c. TOF d. PDA

Explanation
- ***Classification of Congenital Heart Disease***
  - *Left to Right shunts (Acyanotic): ASD, VSD,PDA*
  - *Right to Left Shunts(Cyanotic):Tetralogy of Fallot, transposition of great vessels, Tricuspid valve atresia, TAPVC, Persistent Truncus arteries, Ebstein anomaly.*
  - *Obstructive lesions:Coarctation of Aorta, Aortic stenosis, Pulmonary stenosis*

Ref: Cardiology and Critical Care by Prof. Dr.ArunSayami, page no. 149

122. An ampoule of adrenaline 1: 1000 means

a. 1 mg/ml b. 0.1 mg/ml
c. 10mcg/ml d. 1mg/ml

Explanation
- ***Qualitative and Quantitative composition:***
  Each 1 ml contains 1 mg adrenaline as adrenaline acid tartarate.

Ref:https;//www.medicines.org.uk/emc/product/3673/smpc

123. Volume of urine for oliguria is-

a. <100 ml in 24 hours
b. <300 ml in 24 hours
c. <500 ml in 24 hours
d. <800 ml in 24 hours

Explanation
- *Oliguria is defined as being present when less than 300ml urine is passed per day.*
  Anuria is deemed to exist when less than 50 ml of urine is passed per day.
  Polyuria is defined as a urine volume in excess of 3L/day.

Ref: Davidson's Principle and practice of Medicine22nd edition, page no. 471,472

124. All the following are features of Anorexia Nervosa except-

a. Predominantly seen in females
b. There is loss of weight at the time of presentation

121. C 123. D 124. C
122. a

c. Amenorrhea is rare.
d. There is avoidance of high calorie diet.

Explanation:

- *Anorexia nervosa is an eating disorder characterized by the following prominent clinical features:*
  1. *It occurs much more often in females as compared to male.*
  2. *There is intense fear of becoming obese.*
  3. *Significant weight loss occurs.*
  4. *There is often a body image disturbance.*
  5. *No known medical illness.*
  6. *Absence of any other primary psychiatric disorders.*
  7. *Amenorrhea,primary or secondary, is often present in females.*

Ref: Ahuja A Short Textbook of Psychiatry, 7th edition, page no. 142

125. Sterilization means

a. Killing the microorganisms as well as their spores.
b. Killing the microorganisms
c. Boiling milk at 63 degree Celsius
d. Get rid of possible microorganisms from the surface

Explanation:

- *Sterilization is a process by means of which an article, surface or medium is made free from all living microorganisms including spores.*
- *Disinfection is a process of destruction of vegetative form of pathogenic organisms which are capable of producing infection but necessarily resistant spores.*

Ref: Textbook of Microbiology by P. Chakraborty Page no. 34

126. A non painful cyst in vaginal wall at the junction of middle and lower one third-

a. Gartner cyst
b. Bartholin's cyst
c. Nabothian cyst
d. Herculean cyst

Explanation:

Features of Gartner's cyst:

- *The Gartner's cyst is usually situated in the anterolateral wall of vagina.*
- *The epithelium is low columnar and secrete mucinous material.*
- *Rugosities of the overlying vaginal mucosa are lost.*
- *Vaginal mucosa over it becomes tense and shiny.*
- *Margins are well defined.*
- *It is not reducible.*
- *There is no impulse on coughing.*
- *The treatment is by surgical excision.*

Ref: DC Dutta's Textbook of Obstetrics 8th edition, page no.505, 869

127. A man of 32 years has presented with fever , jaundice and right hypochondrium pain, the mostlikely diagnosis is-

a. Acute cholecystitis b. Acute cholangitis
c. Acute hepatitis d. Choledocholithiasis

Explanation

Charcot's triad of ascending cholangitis

- *Intermittent pain(may be colicky)*
- *Intermittent fever*
- *Intermittent jaundice*

Ref: SRB'S Manual of Surgery by Sriram Bhat M, 4th edition, page no. 691

128. 1 gm of hemoglobin carries how much oxygen:

a. 1.34ml b. 1.6 ml
c. 3.34ml d. 33ml

Explanation:

- *The blood of normal person contains about 15 gm of hemoglobin in each 100 milliliters of blood, and each gram of hemoglobin can bind with a maximum of 1.34 milliliters of oxygen. Therefore, 15 times 1.34 equals 20.1, which means that, on average, the 15 gms of Hb in 100ml of blood can combine with a total of about 20 ml of oxygen if the Hb is 100% saturated. This is usually expressed as 20 volume percent.*

Ref: First Aid for the USMLE step 1, 2018, page no. 649

129. Which drug doesn't pass through placenta-

a. Warfarin b. Heparin
c. Atropine d. Morphine

Explanation:

- *Heparin is large, highly ionized molecule;therefore not absorbed orally. Injected i.v. it acts instantaneously,but after s.c injection anticoagulant effect develops after around 60 mins. Bioavailability of s.c heparin is inconsistent. Heparin doesnot cross the blood brain barrier or placenta. Thus, it is the anticoagulant of choice during pregnancy. It is metabolized in liver by heparinase and fragments are excreted in urine.*

Ref: KD Tripathi –Essentials of Medical Pharmacology,6th edition, page no. 598

130. Isoflurane is excreted through-

a. Kidneys b. Lungs
c. Liver d. Bile

Explanation:

- *Inhaled Isoflurane is almost 100% excreted through lungs and only about 0.2% can be recovered as urinary metabolites. The likelihood of renal or hepatic toxicity of isoflurane anesthesia is considered to be minimal.*

Ref: Lee's Synopsis of Anesthesia,13th edition page no. 133-135

Answer					
121.c	TOF	122.a	1 mg/ml	123.b	<300 ml in 24 hours
124.c	Amenorrhea is rare.	125.a	Killing the microorganism...	126.a	Gartner cyst
227.b	Acute cholangitis	128.a	1.34ml	129.a	Warfarin
130.b	Lungs				

A child is brought by his mother with complaints of swelling around eyelids along with ↓ed urine output for 7 days.

131. Which investigation will you do as initial assessment?

a. 24 hrurinary protein
b. Urine RE/ME
c. ECG
d. Urine acetone

➲ ***Disease*** — ***Initial investigation***

Nephrotic syndrome	*24 hr urinary protein*
Nephritic syndrome	*Urine RE/ME*
MI	*ECG*
Pneumonia, bronchiolitis	*X-ray*
Wilm's tumor	*USG abdomen*

Ref: Ghai Essential Paediatrics 8th edition, Page no.478

132. What is the most likely diagnosis?

a. Nephrotic syndrome
b. Neptiritic syndrome
c. Congestive Cardiac failure
d. Liver failure

➲ ***Nephrotic syndrome:-*** *Proteinuria > 3.5 gm/day, hypoalbuminemia, edema, hyperlipidemia.*

Note: *Periorbital swelling is the key point in nephrotic syndrome.*

➲ ***Nephritic syndrome:-*** *Hematuria, HTN, edema and oliguria are features of nephritic syndrome.*

Ref: Ghai Essential Paediatrics 8th edition, Page no.477

➲ *Progression of swelling: (in general):*

a. *Renal origin → start from face*
b. *Cardiac origin: start from feet*
c. *Hepatic orgin (liver): Start from abdomen*

133. On examination, his BP is 110/70mmHg. Total cholesterol is increased and serum albumin is decreased. What will be the management option of the above condition?

a. Oral prednisolone
b. NSAIDs
c. Diuretics
d. Cyclophosphamide

➲ ***Prednisolone in nephrotic syndrome:***

2 mg/kg/day (max. 60 mg) single or divide dose for 6 wks

↓

1.5 mg/kg (max. 50 mg) single morning dose on alternate day for next 6 weeks.

Ref: Ghai Essential Paediatrics8thedition,Page no.479

134. The child also has ascitis. How will you treat the condition?

a. furosemide + spironolactone
b. furosemide with albumin
c. furosemide
d. As Therapeutic ascitic tapping

➲ *Furosemide - 4mg/kg/day in 2 divided dose alone or with aldosterone antagonist, spironolactone (2 - 3 mg/kg/day in 2 divided doses) → for management of edema.*

Ref: Ghai Essential Paediatrics 8thedition, Page no.480

Role of spironolactone:

➲ *Nephrotic syndrome → decreased renal perfusion → activation of RAAS pathway → ↑ed aldosterone → ↑ed Na^+ & H_2O retention.*

So; Spironolactone, an aldosterone antagonist is used.

135. What will be the indication of renal biopsy in this patient?

a. > 3 relapses in a year
b. less than 1 year
c. High C_3 serum level
d. Hypotension

➲ ***Indication of Renal biopsy:***

1. *Age < 1 year > 8 year*
2. *Hypertension*
3. *Raised serum creatinine*
4. *Low C_3 serum level*
5. *Persistent microscopic or gross hematuria*
6. *No response to 6 wks daily divided dose of steroid therapy.*

Ref: Nelson Textbook of Paediatrics, 19th edition, page no. 1804

Answer					
131.a	24 hrurinary protein	132.a	Nephrotic syndrome	133.a	Oral prednisolone
134.a	furosemide + spironolactone	135.b	less than 1 year		

A 45 yrs male is rushed to ER with severe chest pain radiating towards left upper limb, Q waves in ECG with sweating & palpitation. He is diagnosed to have inferior wall MI.

136. Which of the following is not the criteria fordiagnosis of above condition?

a. Typical history and examination finding

b. Characteristic ECG changes
c. Rise in cardiac markets
d. Presence of risk factors.

➲ *WHO crieria for diagnosing MI include all 3 options except option D. (2 out of 3 criteria should be fullfilled for the diagnosis).*

Ref: Cardiology and Critical Care by Prof. Dr.Arun Sayami Page no. 59

137. Which of the following enzyme will rise early in MI?

a. Troponin I
b. LDH
c. CPK-MB
d. ALP

➲ ***Cardiac markers:-***

Markers	Detectable at	Remains upto
Myoglobin	30 min	–
Troponin	3-4 hrs	10 days
CKMB	3-4 hrs	3-4 days

Ref: Cardiology and Critical Care by Prof.Dr.ArunSayami Page no. 56

138. Identify the correct ECG changes?

a. ST elevation → Tall T wave → pathological Q wave.
b. Tall T wave → Q wave → ST elevation
c. Pathological Q wave → ST elevation → Tall T wave.
d. ST Elevation → Q wave → Tall T wave.

➲ *Pattern ECG changes in MI:*
Hyperacute T wave → ST segment elevation → T wave inversion → pathological Q waves (Usually after 6-12 hrs).

Ref-Cardiology and Critical Care by Prof.Dr.ArunSayami Page no. 61

139. One of them is relative contraindication for using streptokinase.

a. Active internal bleeding
b. Stroke within 3 month
c. Pregnancy
d. H/o cholecystectomy 7 months back.

➲ ***Contraindications of streptokinase (fibrinolytic agents)***

Absolute	Relative
– *Neurological: (IC hemorrhage, IC neoplasm, IC surgery, structural vascular lesion, trauma →, stroke within 3 month)*	– *Neurological: IC pathology not covered in absolute CI, Stroke of > 3 month.*
– *Cardiac (HTN, aortic dissection)* – *Hematological: active bleeding*	***Others:*** – *Pregnancy* – *Peptic ulcer* – *Surgery < 3 month* – *Recent bleeding*

Ref: Cardiology and Critical Care by Prof.Dr.ArunSayami Page no. 9

140. Which drug help in cardiac remodelling?

a. Aspirin
b. Enalapril
c. Statins
d. Clopidogrel

➲ ***ACE inhibitors:-***
- *Used in MI as it help in cardiac remodeling*
- *Used in it diabetic nephropathy as it control proteinuria.*
- *C/I in pregnancy due to teratogenecity*
- *Cough is common side effect (due to ↑ed level of bradykinin).*

Ref: Cardiology and Critical Care by Prof.Dr.ArunSayami Page no. 12

Answer

136.d	Presence of risk factors.	137.a	Troponin I	138.a	ST elevation -->Tall T wave..
139.c	Pregnancy	140.b	Enalapril		

A female at 37 weeks POG came with BP of 170/100, seizure and pedal edema.

141. What is the probable diagnosis?

a. Pre eclampsia
b. Eclampsia
c. GHTN
d. Epilepsy

Explanation:
➲ *Gestational HTN: BP ≥ 140/90mmHg for 1st time in pregnancy after 20 wks without proteinuria.*
➲ *Preeclampsia → Gestational HTN with proteinuria*
➲ *Eclampsia: Pre eclampsia + Convulsion/coma*
➲ *Chronic HTN → known HTN before pregnancy or HTN diagnosed 1st time before 20 wks of pregnancy*

Ref:DC Dutta's Textbook of Obstetrics, 9th edition, page no 207

142. What is the immediate management?

a. $MgSO_4$
b. Diazepam
c. Carbamazepine
d. Phenytoin

Regimens:
➲ *Pritchard (i.m.):*

Loading dose	Maintenance dose
4 gm (20% solution) i.v over 5 min followed by 10 gm (50% solution) i.m, 5gm in each buttock.	*5 gm (50% solution) i.m in alternate buttock 4 hrly.*

➲ *Zuspan (i.v)*

Ref: DC Dutta's Textbook of Obstetrics, 9th edition, page no 221

143. Which of the following organ is not affected by the above condition?

a. Liver
b. Skeletal muscle
c. Eye
d. Kidney

Ref: DC Dutta's Textbook of Obstetrics, 9th edition, page no 219

144. NOT a complication of it.

a. Injuries
b. IUGR
c. infection
d. Hyperpyrexia

➲ *Complications:*

Maternal	Fetal
Injuries	Prematurity
Pulmonary complications (edema, pneumonia)	Intrauterine asphyxia (IUGR).
Hyperpyrexia	
Cardiac (left ventricular failure)	
Renal failure	
Hepatic (necrosis, subcapsular hematoma)	
Cerebral (edema)	
Disturbed vision	

Ref: DC Dutta's Textbook of Obstetrics, 9th edition, page no 220

145. Pregnancy is:

a. Terminated after the patient is stabilized.
b. Terminated immediately
c. Donot depend on above mentioned condition
d. Continued

Initial resolution of seizures, patient stable → Obstetric management.

Ref: DC Dutta's Textbook of Obstetrics, 9th edition, page no 223

Answer

141.b	Eclampsia	142.a	$MgSO_4$	143.b	Skeletal muscle
144.c	infection	145.a	Terminated after the patient is stabilized		

51 year old school teacher visited Gynae OPD with chief complaint of bleeding PV for 5 days. Examination shows normal uterus with normal USG finding.

146. What could be the most common cause of above condition?

a. Senile vaginitis
b. Endometrial Ca
c. Cervical Ca
d. Fiborid Uterus

Explanation:

➲ *Post menopausal women with PV bleeding → Endometrial Ca unless proven otherwise.*

Post coital bleeding → suggestive of cervical Ca.

Ref: DC Dutta's Textbook of Gynaecology, 6th edition, page no. 356

147. What will be the best management option?

a. Endometrial biopsy
b. Hysteroscopy
c. Hysteroscopy guided EB
d. USG

Ref: DC Dutta's Textbook of Gynaecology, 6th edition, page no. 356

148. Which of the following is the histological finding of above condition?

a. Atroptic endometrium
b. Simple cystic hyperplasia
c. Complex adenomatous hyperplasia with atypia
d. Complex adenomatous hyperplasia without atypia

Ref: DC Dutta's Textbook of Gynaecology, 6th edition, page no. 329

Type of hyperplasia	Progression to cancer
Simple(cystic without atypia)	1
Complex (adenomatous without atypia)	3
Simple (cystic with atypia)	8
Complex (adenomatous with atypia)	29

149. How do you manage complex adenomatous atypia?

a. Endometrial ablation
b. Hysterectomy
c. Hysterotomy
d. Radiotherapy

Natural history	Treatment
Simple hyperplasia, no atypia	Progestin
Complex hyperplasia, no atypia	Progestin
Complex hyperplasia with atypia	Hysterectomy or progestin
Endometrial Ca	TAH BSO

Ref: Kaplan USMLE step 2 CK lecture notes ,Gynae and Obs

150. Which of the following is its risk factor?

a. Obesity, HTN and DM
b. Hyperthyroidism
c. Liver failure
d. Renal failure

➲ ***Risk factors of endometrial Ca:***

Obesity, HTN, DM, nulliparity, late menopause & chronic anovulatary conditions like PCOS.

Ref: DC Dutta's Textbook of Gynaecology, 6thedition, page no. 358

➲ *Ideal time for Endometrial biopsy: Day 24-26 → Secretory endometrium (confirming ovulation)*

Note:Ideal time for cervical mucus study-D_{12-14}, Pap smear → immediately after menstruation D_4-D_{12}.

Answer

146.b	Endometrial Ca	147.c	Hysteroscopy guide EB	148.c	Complex adenomatous...
149.b	Hysterectomy	150.a	Obesity,HTN and DM		

A 15 yrs old boy complains of swelling over the distal thigh which is progressively increasing and dull aching. There is no h/o trauma or fever. Superficial veins are prominent and there is slight raise in local temperature.

151. Which is the most likely diagnosis?

a. Ewing sarcoma
b. Brodiesabscess
c. Osteosarcoma
d. GCT

➲ ***Osteosarcoma:***
- *History: Age → common in 2nd decade*
- *Site: Lower end of femur (m.c. site)*

Examination:
Superficial prominent veins
↑ed local temperature

Ref: Essential Orthopaedics, Maheswari and Mhaskar, 5th edition, page no.240

152. Which is the most common site of above condition?

a. Upper part of femur
b. Upper part of tibia
c. Lower part of femur
d. Lumbar vertebra

Tumors	*Most common site*
Osteosarcoma	*Lower end of femur (1st)* *Lower end of tibia (2nd)*
Enchondroma	*Short bones of hand*
Chordoma	*Sacrum*
Multiple myeloma	*Lumbar vertebra*
GCT	*Lower end of femur*

Ref: Essential Orthopaedics, Maheswari and Mhaskar, 5thedition, page no.239

153. It arises from:

a. Metaphysis
b. Epiphysis
c. Diaphysis
d. Cortex

➲ *Epiphyseal origin: GCT, chondroblastoma*
➲ *Diaphyseal: Multiple myeloma, osteoid osteoma, Ewing sarcoma @ MOE*
➲ ***Metaphyseal:****Osteochondroma, enchondroma, osteosarcoma,chondrosarcoma.*

Ref:Essential Orthopaedics, Maheswari and Mhaskar, 5th edition, page no.240

154. What is the initial investigation you would like to do in this case?

a. USG
c. X-ray
c. CT
d. MRI

X ray findings:
➲ ***Osteosarcoma:*** *Sun brust appearance*
➲ ***Ewing sarcoma:*** *Onion peel appearance*
➲ ***GCT:****soapbubble appearance*

Ref: Essential Orthopaedics, Maheswari and Mhaskar, 5th edition, page no.240

155. Which of the following is not its risk factor?

a. Viral infections
b. Radiation exposure
c. Paget's disease of bone
d. Bone infraction

➲ ***Risk factors of Osteosarcoma:***
Age, Height, Gender (common in male), Race, Radiation, Bone disease (Paget's disease, Osteochondroma,bone infarction), inherited cancer syndrome (Retinoblastoma, Li-fraumeni syndrome).

Ref:Essential Orthopaedics, Maheswari and Mhaskar, 5thedition, page no.239

Answer

151.c	Osteosarcoma	152.c	Lower part of femur	153.a	Metaphysis
154.c	X-ray	155.a	Viral infections		

A 40 years male is brought in ER following RTA. On Examination there is decreased breath sound along with dull note on precussion on right side of chest. His BP is 90/50 mm Hg with RR of 24 breath/ min and pulse of 88 beats per minute.

156. Which of the following is not the initial management?

a. Endotracheal intubation
b. Start IV antibiotics
c. FAST scan
d. Start IV fluid

➲ *Management of flail chest include oxygen administration, adequate analgesia and physiotherapy.*

Ref:Bailey and Love Short Practice of Surgery, 26th edition, page no. 355

157. If you were MO in that ER, how will you diagnose small hemothorax?

a. USG
b. Chest X-ray
c. CT
d. MRI

➲ *Routine investigations of chest injury in ER is based on clinical examination supplemented by chest radiograph.*
➲ *USG can be used to differentiate between contusion and hemothorax.*

Ref:Bailey and Love Short Practice of Surgery, 26th edition, page no. 353

158. Empyemathoracis is the collection of pus in pleural cavity. What of the following is true regarding it?

a. Inadequate drainge of hemothorax leads to empyema
b. It doesnot impairs lung expansion and doesnotaffects pulmonary function
c. Caused by aerobic organisms

d. Oesophageal perforation couldnot cause empyema

Conditions that predispose to empyema formation:

- *Pumonary infection*
- *Aspiration of pleural effusion*
- *Trauma including oesophageal perforation*
- *Extrapulmonary sources like subphrenic abscess*
- *Bone infections*

Ref: Bailey and Love Short Practice of Surgery, 26th edition, page no. 856

159. Not an indication of chest tube insertion

a. Drainage of > 100 ml immediately after insertion
b. Major tracheobronchial and esophageal injury
c. Ongoing hemorrhage of > 200 ml/hr over 3-4 hrs
d. Cardiac tamponade even if needle aspiration is successful.

- *Indication for urgent thoracotomy:*
  - *Massive hemothorax*
  - *Drainage of > 1500ml blood or ongoing hemorrhage of > 200ml/hr over 3-4hr or 100ml every 15 min for 3 such interval.*
  - *Cardiac tamponade*
  - *Internal cardiac massage*
  - *Large open wound of thoracic cage*
  - *Major esophageal injuries*
  - *Diaphragmatic injury*
  - *Foreign body in esophagus (failed by endoscopic method)*

Ref:Bailey and Love's Short Practice of Surgery, 26thedition, page no. 357

160. Which of the following landmark is true regarding chest tube insertion?

a. 2nd intercostal space midclavicular line
b. Medial border of pectoralis major
c. Inferiorly by base of axilla
d. 5th intercostal space

- ***Safety triangle:***

  Boundaries:
  - *Anteriorly by lateral border of pectoralis major*
  - *Laterally by lateral border of latismusdorsi.*
  - *Inferiorly by the line of 5th IC space*
  - *Superiorly by base of axilla*

Note:*It is the site of insertion of chest tube.*

Ref: Bailey and Love's Short Practice of Surgery, 26th edition, page no. 855

Answer

156.a	Endotracheal intubation	157.a	USG	158.d	Oesophageal perforation couldnot.....
159.d	Cardiac tamponade.....	160.d	5th intercostal space		

A mother presented to OPD with her male child with complaints of 101°F fever, cought and cold of 3 days duration for 1st time. On chest auscultation, B/l wheeze is present.

161. What is the most probable diagnosis?

a. Bronchiolitis
b. Bronchial asthma
c. Pneumonia
d. Bronchiectasis

- *Age (6 months to 2 yrs), first episode with fever (differentiate it from asthma) B/l wheeze favors diagnosis of bronchiolitis.*

Ref: Ghai Essential Paediatrics , 8th edition, page no. 381

162. What history will you take to rule out the differential diagnosis?

a. H/o atopy
b. H/o chest pain
c. Siblings with stridor
d. Family hx of URTIs

Note: *History of atopy (like skin allergy, running nose) → diagnostic of asthma.*

Ref: Ghai Essential Paediatrics, 8th edition, page no. 381

163. What investigation will you further do to rule out the other diagnosis?

a. PFT
b. Chest X-ray
c. Sputum culture
d. ABG

Disease	*X-ray findings*
Bronchiectasis	*Hyperinflated lung field with pathy atelectasis*
Pneumonia	*Air bronchogram and consolidation (pneumatocele in staph pneumonia)*
Asthma	*Hyperinflation, bronchial thickening and focal atelectasis*
Bronchiectasis	*Tram track opacities, ↑ed bronchovascularmarking*

Ref: Ghai Essential Paediatrics, 8th edition, page no. 381

164. What will you give to high risk patient?

a. Monoclonal antibody
b. NSAIDs
c. Antibiotics
d. Steroids

- *Palivizumab (monoclonal antibody) is given as prophylaxis (NOT TREATMENT) for high risk patient.*

Ref:First Aid for the USMLE step 12018, page no. 122

165. What is the appropriate management?

a. IV fluids
b. Antibiotics
c. Steroids
d. Supportive

- *Treatment is essentially symptomatic.*
- *Child is nursed in humid atmosphere.*
- *Antibiotics has no role.*
- *Ribavirin, an antiviral has no role in children who are previously healthy.*

- Beta 2 adrenergic drug and ipratropium are not recommended in children less than 6 months.
- CPAP or assisted ventilation may be required in respiratoryfailure.

Ref: Ghai Essential Paediatrics, 8th edition, page no. 382

Answer					
161.a	Bronchiolitis	162.a	H/o atopy	163.b	Chest X-ray
164.a	Monoclonal antibody	165.d	Supportive		

A male child presented with swelling of bilateral knee. He was later diagnosed as a case of Hemophilia.

166. What is the inheritance pattern of this disease?

a. Autosomal dominant
b. Autosomal recessive
c. X-linked dominant
d. X-linked recessive

➲ *Inheritence pattern of some common disorders:*
- ***Autosomal dominant:*** *Achondroplasia, ADPKD, hereditary spherocytosis, NF, Marfan syndrome.*
- ***Autosomal recessive:*** *Cystic fibrosis, sickle cell anemia, Wilson disease, hemochromatosis.*
- ***X linked recessive:*** *Hemophilia, Duchene muscular dystrophy, G6PD deficiency, Lesch - Nyhan syndrome.*

Ref: Ghai Essential Paediatrics, 8th edition, page no. 352

167. Joint aspiration shows:

a. Anthracotic pigment
b. Crystals
c. Neutrophils
d. Blood

Joint aspirate	*Disease*
Urate crystals	*Gout*
Neutrophils	*Septic arthritis*

Ref: Nelson Textbook of Paediatrics, 19th edition, page no. 1699

168. Hematological investigation shows:

a. Normal PT and normal APTT
b. ↑ed PT and normal APTT
c. ↓ed PT and ↑ed APTT
d. Normal PT and ↑ed APTT

Ref:First Aid for the USMLE step 1 2018 , page no. 414

➲ *Lab findings in Hemophilia includes normal or low hemoglobin, normal platelet count, normal bleeding time and PT but severely prolonged APTT.*
➲ *PT → test the function of extrinsic and common pathway.*
➲ *APTT → test function of intrinsic pathway (all factor except VII and XIII)*
➲ *Pneumonics:*
Play Tennis outside → extrinsic factor
Play Table Tennis inside → intrinsic factor

169. This factor is stabilized by:

a. VWF
b. Factor IX
c. Factor V
d. Factor III

➲ *Factor VIII is stabilized by Von Willeband Factor.*

Ref: Ghai Essential Paediatrics , 8th edition, page no. 353

170. Management of this condition:

a. Factor VIII transfusion
b. Factor VIII and VWF complex transfusion
c. Factor IX transfusion
d. Packed cell transfusion

➲ ***Management:***
- *Hemophilia A: Demopressin + factor VIII concentrate / factor VIII concentrate only*
- *Hemophilia B: factor IX concentrate*
- *Hemophilia C: factor XI concentrate*

➲ *Cryoprecipitate(factor VIII+fibrinogen+VWF) and FFP (all factors including labile factors V and VII)can be used to control bleeding but carry the risk of transmitting HIV and hepatitis B and C.*

Ref:Ghai Essential Paediatrics, 8th edition, page no. 353

Note:*Remember the name of clotting factors. Few are:*
Factor I:fibrinogen
Factor II:prothrombin
Factor IV:clacium

Answer					
166.d	Xlinked recessive	167.d	Blood	168.d	Normal PT and Increased APTT
169.a	VWF	170.a	Factor VIII transfusion		

51 years male is brought to ER with complaints of difficulty moving right side of the body. He has dropping of right angle of mouth, difficulty speaking but was able to follow command.

171. Speech disorder in this case is:

a. Wernicke's aphasia
b. Broca's aphasia
c. Scanning speech
d. Dysarthria

	Brocas aphasia	*Wernicke's aphasia*
Comprehension	*Preserved*	*Impaired*
Site of lesion	*Inferior frontal gyrus (emboli in superior division of MCA), area no: 44, 45*	*Superior temporal gyrus/ inferior parietal strip (emboli in inferior division of MCA) area no: 22*

Ref: Macleod's Clinical Examination, 13th edition, page no. 248

172. Which nerve is responsible for dropping of angle of mouth?

a. CN VIII
b. CN VII
c. CN X
d. CN V

➲ *Facial muscles: Supplied by facial nerve*
[Note: Know about the course, nucleus and supply of facial nerve.]
Ref: Macleod's Clinical Examination, 13th edition, page no. 254

173. Part of brain affected in this case is:

a. Internal capsule and thalamus
b. Precentral gyrus + Broca's area
c. Pons
d. Cerebellum and mid brain

➲ *Fibres are densely packed in internal capsule, so, small lesion on it could lead to hemiparesis.*
Ref: Macleod's Clinical Examination, 13th edition, page no. 248

174. Which artery is involved in this case?

a. Anterior cerebral artery
b. Middle cerebral artery
c. Inferior cerebellar artery
d. Posterior cerebral artery

➲ *Infarction of:*
- *MCA: Involvement of upper limbs > lower limbs*
- *ACA: Involvement of lower limb > upper limb*
- *PCA:Occular manifestations*

➲ *Internal capsule is supplied by the lenticulostriate branch of MCA.*
Ref: First Aid for the USMLE step 1 2018, page no. 498

175. If this individual develops Pseudobulbar palsy,where will be the site of lesion?

a. Pons
b. Cerebral cortex
c. Medulla
d. Cerebellum

➲ – *Midbrain- Nuclei of CN III, IV*
– *Pons- Nuclei of CN V,VI,VII,VIII*
– *Medulla- Nuclei of CN IX,X,XII*
– *Spinal cord-Nucleus of CN XI*
Ref: First Aid for the USMLE step 1 2018, page no. 489

Answer

171.b	Broca's aphasia	172.b	CN VII	173.a	Internal Capsule...
174.b	Middle cerebral....	175.a	Pons		

A 2 yr old male child presented with painless hematuria and abdominal lump on right side. Later, he was diagnosed to have Wilm's tumor.

176. Which investigation do you want to carry out first to reach the diagnosis?

a. USG
b. X-ray
c. CT
d. MRI

Ref: Ghai Essential Paediatrics, 8thedition, page no. 618

177. Which one of the following is not Paediatrictumor?

a. Cystic nephroma
b. Wilm's tumor
c. Lymphoma
d. Clear cell carcinoma

➲ *Wilm's tumor (nephroblastoma): Common in < 5 yrs of age.*
RCC: common in 50-70yrs of age
Ref: Bailey and Love's Short Practice of Surgery, 26th edition, page no. 1304

178. Which one of the following isnot associated with wilm'stumor?

a. Aniridia
b. Mental retardation
c. Cryptoorchidism
d. Juvenile diabetes

Ref: Ghai Essential Paediatrics, 8thedition, page no. 617
- *Asosciated with:*
  WAGR complex: Wilm's tumor, aniridia, genitourinarymalformation, and mental retardation.
- *Deny-drash tumor: Wilm's tumor, Dysgenesis of gonads, diffuse mesengial sclerosis).*
- *Beckwith weidemann: Wilm's tumor, macroglossia, organomegaly, hemihyperplasia.*

179. False regarding epidemiology of Wilm's tumor

a. It is themost common childhood malignant tumor of kidney
b. 8% of paediatric tumor are wilm's tumor
c. 80% of wilm's tumor present below 5 yrs
d. White are affected more than blacks

➲ *5-7% of paediatric tumor is wilm'stumor.*
➲ *80 % of patients present below 5 year of age.*
➲ *6% patients have bilateral tumor.*
➲ *Peak age of diagnosis is 2-3 years.*
➲ *Frequency is similar in boys and girls.*
➲ *Blacks are affected morethan whites.*
Ref: Ghai Essential Paediatrics, 8th edition, page no. 617

180. Not a management option of above condition

a. Radical nephrectomy
b. Partial nephrectomy
c. Chemotherapy alone
d. Radiotherapywith or without chemotherapy

- *Management depends on the stage of tumor and histology.*
- *The immediate treatment for unilateral disease is removal of affected kidney.*
- *Combination of vincristine, actinomycin D and Adriamycin along with abdominal irradiation → for advanced disease.*
- *Approx. 80-90% of patients are cured with modern therapy.*

Ref: Ghai Essential Paediatrics, 8th edition, page no. 618

Answer

176.a	USG	177.d	Clearcell carcinoma	178.d	Juvenile diabetes
179.d	Whites are affected....	180.c	Chemotherapy alone		

NMCLE - 2075 Chaitra

Anatomy

1. Pronator teres is supplied by:

a. Median b. Radial
c. Ulner d. Axillary

➲ *The pronator teres is a muscle (located mainly in the forearm) that, along with the pronator quadratus, serves to pronate the forearm (turning it so that the palm faces posteriorly when from the anatomical position). It has two attachments, to the medial humeral supracondylar ridge and the ulnar head, and inserts near the middle of the radius.*

➲ *The pronator teres is innervated by the median nerve.*

Reference: Wiki

2. Broca'sandWernickes area is supplied by:

a. Anterior carebral Artery
b. Middle cerebral Artery
c. Posterior cerebral Artery
d. Cerebellar Artery

➲ *Areas supplied by the middle cerebral artery include:*
The bulk of the lateral surface of the hemisphere, except for the superior inch of the frontal and parietal lobe (anterior cerebral artery), and the inferior part of the temporal lobe.
Superior division supplies lateroinferior frontal lobe (location of Broca's area i.e. language expression)
Inferior division supplies lateral temporal lobe (location of Wernicke's area i.e. language comprehension)
➲ *Deep branches supply the basal ganglia as well as the internal capsule*

Reference: Wikipedia

3. LigamentumTereshepatis is remnant of:

a. Portal vein b. Umbilical vein
c. Umbilical artery d. None

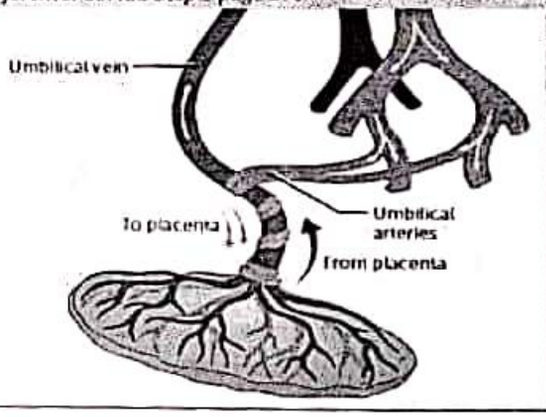
Fetal-postnatal derivatives

AllaNtois → urachus	MediaN umbilical ligament	Urachus is part of allantoic duct between bladder and umbilicus.
Ductus arteriosus	Ligamentum arteriosum	
Ductus venosus	Ligamentum venosum	
Foramen ovale	Fossa ovalis	
Notochord	Nucleus pulposus	
UmbiLical arteries	MediaL umbilical ligaments	
Umbilical vein	Ligamentum teres hepatis (round ligament)	Contained in falciform ligament.

4. Umbilicus contains:

a. 2 artery 1 vein b. 2 vein 1 artery
c. 2 artery 2 veins d. 3 artery 1 vein

Look in the fig carefully
Reference: USMLE Step 1 page 270



5. Skeleton is developed from:

a. Ectoderm b. Mesoderm
c. Endoderm d. All of the above

Derivatives of three germ layers

Ectoderm	Mesoderm	Endoderm
CNS (Brain and spinal cord) PNS Sensory epithelia of eye ear and nose	Cartilage Bones Stratified and smooth muscles Ovaries and testis	Digestive and respiratory tract Liver Pancreas Urinary bladder

Reference: Moore clinically oriented embryology Page 72/74

Answer		
1.a. Median	2.b. Middle cerebral	3.b. Umbilical vein

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4.a.	2 artery 1 vein	5.b.	artery Mesoderm		

Physiology

6. **Doctors team went to Mount Everest base comp for research about mountaineers. What will remain constant after Doctors are acclimatized in weather of Mt. Everest?**
   a. Cardiac output b. Ventilation
   c. Tidal volume d. Residual volume

7. **One patient has amputated his right hand but he feels pain sensation over his fingers. Which of following defines the case?**
   a. Law of projection b. Phantom limb phenomenon
   c. Fick's law d. Dalton's law

➲ *A phantom limb is the sensation that an amputated or missing limb is still attached. Approximately 60 to 80% of individuals with an amputation experience phantom sensations in their amputated limb, and the majority of the sensations are painful. Phantom sensations may also occur after the removal of body parts other than the limbs, e.g. after amputation of the breast, extraction of a tooth (phantom tooth pain) or removal of an eye (phantom eye syndrome)*

Reference: https://en.wikipedia.org/wiki/Phantom_limb

8. **After filtration most of the water is reabsorbed by:**
   a. PCT b. DCT
   c. Loop of Henle d. Collecting duct

➲ *Reabsorption is the transport of molecules from this ultrafiltrate and into the peritubular capillary. It is accomplished via selective receptors on the luminal cell membrane. Water is 55% reabsorbed in the proximal tubule. Glucose at normal plasma levels is completely reabsorbed in the proximal tubule. The mechanism for this is the Na+/glucose cotransporter. A plasma level of 350 mg/dL will fully saturate the transporters and glucose will be lost in the urine. A plasma glucose level of approximately 160 is sufficient to allow glucosuria, which is an important clinical clue to diabetes mellitus. Amino acids are reabsorbed by sodium dependent transporters in the proximal tubule. Hartnup disease is a deficiency of the tryptophan amino acid transporter, which results in pellagra.*

Reference: https://en.wikipedia.org/wiki/Kidney#Reabsorption

9. **Megaloblastic anemia is caused by deficiency of:**
   a. Vitamin B_1 b. Vitamin B_2
   c. Vitamin B_3 d. Vitamin B_{12}

➲ *Functions: Cofactor for methionine synthase (transfers CH3 groups as methylcobalamin) and methylmalonyl-CoAmutase. Important for:*
- *DNA synthesis*
- *Deficiency*

➲ *Macrocytic, megaloblastic anemia; Hypersegmented PMNs; paresthesias and subacute combined degeneration (degeneration of dorsal columns, lateral corticospinal tracts, and spinocerebellar tracts) due to abnormal myelin*

Reference: USMLE Step 1 Page 66

Answer

6.c	Tidal volume	7.b.	Phantom limb phenomenon	8.a.	PCT
9.d.	Vitamin B12				

Pathology

10. **Colour blindness is inherited as:**
    a. X-linked recessive
    b. X-linked dominant
    c. Autosomal dominant
    d. Autosomal recessive

➲ *Color blindness is typically an inherited genetic disorder. It is most commonly inherited from mutations on the X chromosome, but the mapping of the human genome has shown there are many causative mutations—mutations capable of causing color blindness originate from at least 19 different chromosomes and 56 different genes*

Reference: https://en.wikipedia.org/wiki/Color_blindness#Genetics

11. **Permanent change in DNA is:**
    a. Apoptosis b. Mutation
    c. Deletion d. Transcription

➲ *As it is well known the term mutation refers to permanent changes in the DNA. Those affects progeny and may rise to inherited diseases. Mutations in somatic cells are not transmitted to the progeny but are important in the causation of cancers and some congenital malformations.*

Reference: Robbins Basic Pathology 8th edition page 227

12. **Liquefactive necrosis is seen in:**
    a. Heart b. Liver
    c. Brain d. Lung

Reference: USMLE step 1 Page 205

10.a 11.b 12.c

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Type	Seen In	Due to	Histology
Coagulative	Ischemia/ Infracts in most tissues (except brain)	Ischemia or infarction; proteins denature, then enzymatic degradation	Cell outlines preserved but nuclei disappears ↑ cytoplasmic binding of cosin dyes
Liquefactive	Bacterial abscesses, brain infarcts	Neutrophils release lysosomal enzymes that digest the tissue; enzymatic degradation first, then proteins denataure	Early: cellular debris and macrophages Late cystic spaces and cavitation (brain) Neutrophils and cell debris seen with bacterial infection
Caseous	TB, systemic fungi (eg. Histoplasma capsulatum), Nacrodia	Macrophages wall off the infecting microorganism → granular debris	Fragmented cells and debris surrounded by lymphocytes and macrophages
Fat	Enzymatic: acute pancreatitis (saponification of peripancreatic fat) Nonenzymatic: traumatic (eg, injury to breast tissue)	Damaged cells release lipase to break down triglycerides, liberating fatty acids to bind calcium → saponification	Outlines of dead fat cells without peripheral nuclei; saponification of fat (combined with CA^{2+}) appears dark blue on H & E stain
	Immune reactions in vessels (eg. Polyarteritis nodosa), preeclampsia, malignant hypertension)	Immune complex combine with fibrin → vessel wall damage (type III hypersensitivity reaction)	Vessel wall are thick and pink
Gangrenous	Distal extremity and GI tract, after chronic ischemia	Dry ischemia Wet: superinfection	Coagulative Liquefactive superimposed on coagulative

13. Mallory bodies are seen in:

a. Sarcordosis b. Viral hepatitis
c. Skin tuberculosis d. Alcoholic hepatitis

- *Alcoholic liver disease*
- *Hepatic steatosis: Macrovesicular fatty change that may be reversible with alcohol cessation.*
- *Alcoholic hepatitis Requires sustained, long-term consumption*
- *Swollen and necrotic hepatocytes with neutrophilic infiltration. Mallory bodies (intracytoplasmic eosinophilic inclusions of damaged keratin filaments).*
- *AST > ALT (ratio usually > 2:1).*
- *Alcoholic cirrhosis Final and usually irreversible form. Regenerative nodules surrounded by fibrous bands in response to chronic liver injury*

Reference: USMLE step 1 Page 374

14. Which of the following is an example of type 4 hypersensivity?

a. Type I DM b. Graft vs host
c. Contact dermatitis d. All of the above

Type IV

Two mechanisms, each involving T cells:

1. Direct cell cytotoxicity: CD8+ cytotoxic T cells kill targeted cells.
2. Delayed-type hypersensitivity: sensitized CD4+ helper T cells encounter antigen and release cytokines → inflammation and macrophage activation.

Response does not involve antibodies (vs types I, II, and III).

Example:

- Type 1 diabetes mellitus

Examples:

- Contact dermatitis (eg, poison ivy, nickel allergy)
- Graft-versus-host disease

Tests: PPD, patch test.

4T's: T cells, Transplant rejections, TB skin tests, Touching (contact dermatitis).

Fourth (type) and last (delayed).

Reference: USMLE Step 1 page 109

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Answer					
10.a.	X-linked recessive	11.	Phantom limb phenomenon	12.c	Brain
13.d.	Alcoholic hepatitis	14.d.	All of the above		

Microbiology

15. Commonest organism causing UTI is:
   a. Klebsiella b. Streptococcus
   c. E. coli d. Pseudomonas

➲ *Staphylococcus saprophyticusSecond most common couse of uncomplicated UTI in young women (most common is E coli).*
Reference: USMLE step 1 page 132

16. Which of the following is DNA virus?
   a. Hep A b. Hep B
   c. Hep C d. Hep E

Virus	Family	Genome	Transmission
Hepatitis A	Picornaviridae	ssRNA	Fecal-oral
Hepatitis B	Hepanaviridae	dsDNA	Parenteral
Hepatitis C	Flaviviridae	ssRNA	Parenteral
Hepatitis D	Unclassified	ssRNA	Parenteral
Hepatitis E	Hepeviridae	ssRNA	Fexal-oral

References: Jawetz, Melnick and Adelberg's Medical microbiology pg no. 507

17. HIV core contains which of the following:
   a. Gp 120 and gp41
   b. p17 and p24
   c. HIV RNA polymerase and protease
   d. HIV DNA polymerase and protease

➲ *Structure of HIV virus*
➲ *Outer envelope: Bilipid membrane in which the viral antigens (gp 120 and gp 41) are embedded.*
➲ *Capsid containing p24 protein and contains 2 copies of viral RNA. It also contains matric protein p17.*
➲ *Three important viral enzymes:*
- *Reverse transcriptase (RT)*
- *Integrase*
- *Protease*

Reference: Jawetz, melnick and Adelberg's Medical microbiology pg no. 655

18. Which bacteria acts by inhibiting protein synthesis?
   a. Pseudomonas b. Staphylococcus
   c. Streptococcus d. Klebsiella

➲ *Like diphtheria toxin it blocks protein synthesis in eukaryotic cells by inactivating elongation factor-2.*
Reference: Textbook of microbiology Chakrobarty 345

19. Which of the following is gram negative bacilli?
   a. Neisseria gonorrhoea
   b. Corynebacterium
   c. H. influenza
   d. Pneumococcus

➲ *H influenza is a small gram negative non motile non sporing bacillus exhibiting considerable pleomorphism.*
Reference: Anantanarayan and Panikar text book of microbiology 8th edition page 329

Answer					
15.c.	E.coli	16.b.	Hep B	17.b.	p17 and p24
18.a.	Pseudomonas	19.c.	H influenza		

Bio-Chemistry:

20. A child stands up by support of hand over thigh O/E calf hypertrophy (muscle) is seen interience is:
   a. Autosomal recessive
   b. Autosomal dominant
   c. X-linked recessive
   d. X-linked dominant

➲ *This is a case of Duchene Muscular Dystrophy. It anan X linked recessive disorder resulting from deficiency of dystrophin, a cytoskeletal protein. Onset is usually 3-5 years of age.*
➲ *Clinical features: Affects axial and praximal muscles than distal muscles.*
➲ *Gowers maneuver; using the hands to pushoff the thighs when rising from the floor;*
Pseudohypertrophy of the gastrocnemius is also seen.
Diagnosis is made by ,muscle biopsy which shows necrotic muscle fibers with absence of dystrophin protein.
Reference: USMLE step 2 CK page 413-414

21. Which of the following causes lipid synthesis?
   a. Insulin b. Glucagon
   c. Steroid d. GH

➲ *In the options B, C and D are catabolic hormones and option A is anabolic hormone. Lipid systhesis is anabolic condition and is caused by Insulin.*

22. Fe is absorbed in:
   a. Duodenum b. Stomach
   c. Jejunum d. Ileum

➲ *A mnemonic to remember is CID which means Vitamin C and Iron are absorbed in Duodenum.*

23. Small protein is called
   a. Amino acid b. Ribosome
   c. Peptide d. tRNA

24. Maize is deficient in:
   a. Leucin&lysthe
   b. Lysine & tryptophan
   c. Lysine &melhionine

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d. Lysine & threonine.

➲ *Maize protein is deficient in lysine and tryptophan but has fair amounts of sulphur-containing amino acids (methionine and cystine). On the other hand, the proteinof food legumes is a relatively rich source of lysine and tryptophan but is low in sulphur amino acids. Reference: http:// www.fao.org/ 3/ t0395e/ t0395e0c.htm*

Answer					
20.c.	X-linked recessive	21.a.	Insulin	22.a.	Duodenum
23.c.	Peptide	24.b.	Lysine and tryptophan		

Pharmacology

25. Glaucoma drug contraindicated in asthma?

a. Beta-blocker b. α blocker
c. Acetazolamide d. Atroppine

➲ *Beta blockers are contraindicated in asthma as beta blocker causes bronchoconstriction.*

26. A patient has taken niacin & atorvastatin. What type of disorder will occur?

a. Agranulocytosis b. Anemia
c. Thrombocytopenia d. Rhabdomyolysis

➲ *Using atorvastatin together with niacin may increase the risk of a rare but serious condition called rhabdomyolysis that involves the breakdown of skeletal muscle tissue.*

27. All of the following are teratogenic drugs except:

a. Barbiturates b. Corticosteroids
c. Androgen d. Valporic acid

➲ *List of teratogenic drugs:*
➲ *ACE (angiotensin converting enzyme*
➲ *Acne medication isotretinoin*
➲ *Alcohol ingested chronically or in binges.*
- *Androgens (male harmones).*
- *Antibiotics tetracycline and doxycycline and streptomycin.*
- *Anticoagulant (blood-thinner) warfarin (Coumadin).*
- *Anticonvulsants (seizure medications) such as:*
  - *Phenytoin*
  - *Valproic Acid*

Reference: https:// www.medicinenet.com/ script/ main/ art.asp? articlekey = 9334

28. What the drug does to body is:

a. Pharmacokinetics
b. Pharmacodynamics
c. metabolism
d. Excretion

➲ *Pharmacodynamics (PD) is the study of the biochemical and physiologic effects of drugs (especially pharmaceutical drugs). The effects can include those manifested within animals(including humans), microorganisms, or combinations of organisms (for example, infection). Pharmacodynamics is the study of how a drug affects an organism, whereas pharmacokinetics is the study of how the organism affects the drug. Both together influence dosing, benefit, and adverse effects. Pharmacodynamics is sometimes abbreviated as PD and pharmacokinetics as PK, especially in combined reference*

Reference: https:// en.wikipedia.org/ wiki/ Pharmacodynamics

Answer					
25.a.	Beta-blocker	26.d	Rhabdomyolysis	27.b.	Corticosteroid
28.b	Pharmokodynam				

Community Medicine

29. Bilateral health agency in Nepal?

a. WHO b. UNICEF
c. UNAIDS d. All

➲ *List of bilateral agencies in Nepal are:*
Department for International Development (DFID)
German Development Cooperation (GIZ)
GAVI Alliance (Global Alliance for Vaccines and Immunisation)
The Global Fund (The Global Fund to Fight AIDS, Tuberculosis and Malaria)
KfW (German Development Bank)
UNAIDS (Joint United Nations Programme on HIV and AIDS)
United Nations Children's Fund (UNICEF)
United Nations Office on Drugs and Crime (UNODC)
United Nations Population Fund (UNFPA)
United States Agency for International Development (USAID)
The World Bank
World Health Organisation (WHO)

Reference: https://nhssp.org.np/development-partners.html

30. Cohort study calculates:

a. Odds ratio b. Relative risk
c. Association d. Corelation

Study Type	Design	Measures Example
Cross-sectional study	Frequency of disesase and frequency of risk related factors are assessed in the present. Asks, "What is happening>"	Disease prevalence. Can show risk factor association with disease, but does not establish causality.
Case-control study	Compares a group of people with disease to a group without disease.	Odds ratio (OR) Patients with COPD had higher odds of a history of

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	Looks to see if odds of prior exposure or risk factor differs by disease state. Asks, "What happened?"	smoking than those without COPD.
Cohort study	Compares a group with a given exposure or risk factor to a group without such exposure. Looks too see if exposure or risk factor is associated with later development of disease. Can be prospective (asks, "Who will develop disease?") or retrospective (asks, "Who developed the disease (exposed vs nonexposed?")	Relative risk (RR) "Smokers had a higher risk of developing COPD than nonsmokers."

Reference: USMLE step 1 page 246

31. For HIV concentrate epidemic is defined as:

a. HIV patient less than 1% in total &> 5% in specified group
b. HIV patient less than 2% in total &> 5% in specified group
c. HIV patient more than 1% in total &> 5% in specified group
d. HIV patient more than 2% in total &> 5% in specified group

- *Concentrated HIV epidemic: HIV has spread rapidly in one or more defined subpopulation but is not well established in the general population. Numerical proxy: HIV prevalence is consistently over 5% in at least one defined subpopulation but is less than 1% among pregnant women in urban areas.*
- *Generalized HIV epidemic: HIV is firmly established in the general population. Numerical proxy: HIV prevalence consistently exceeding 1% among pregnant women. Most generalized HIV epidemics are mixed in nature, in which certain (key) subpopulations are disproportionately affected.*
- *Mixed epidemics: people are acquiring HIV infection in one or more subpopulations and in the general population. Mixed epidemics are therefore one or more concentrated epidemics within a generalized epidemic.*
- *Low-level epidemic: epidemics in which the prevalence of HIV infection has not consistently exceeded 1% in the general population nationally or 5% in any subpopulation.*

Reference:https://www.who.int/hiv/pub/guidelines/arv2013/intro/keyterms/en/

32. Maternal mortality Rate is defined as:

a. Number of child deaths per 100,000 live births
b. Number of female deaths per 100,000 live births
c. Number of husband deaths per 100,000 live births
d. Number of female deaths per 100,0000 live births

- *Maternal death is the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes*

Reference: https:// www.who.int/ healthinfo/ statistics/ indmaternalmortality/ en/

- *The maternal mortality ratio (MMRatio) is the annual number of female deaths per 100,000 live births from any cause related to or aggravated by pregnancy or its management (excluding accidental or incidental causes).*

Reference: https:// www.indexmundi.com/ nepal/ maternal_mortality_rate.html

33. Aedesegyptis is a vector of:

a. Dengue fever
b. Brucellosis
c. Leptospira
d. Malaria

Vector borne disease

Arthopods	Arthopods borne disease	
1. Mosquito	Anopheles	Malaria
	Culex	Japanese encephalitis Bancroftianfilariasis
	Aedes	Yellow fever Dengue Chikangunyafever
2. Sandfly	Kala-azar Oriental sore Oraya fever	

Reference: PHO loksewa Easy Entry 2nd edition

34. Disability adjusted life year is calculated by:

a. DALY= YLL (year of lost life) + YLD (years lost to disability)
b. DALY= YLL (year of lost life) - YLD (years lost to disability)
c. DALY= Year of total life) + YLD (years lost to disability)
d. DALY= Year of total life) - YLD (years lost to disability)

- *Disability- adjusted life years (DALY):*
  - *DALY is a measure of:*
    1. *The burden of disease in a defined population.*

31.a

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ii. The effectiveness of interventions.

- DALY= YLL (year of lost life) + YLD (years lost to disability)
- One DALY = one lost year of healthy life.
- DALY measures both mortality and disability together.
- Japanese life expectancy statics are used as a standard for measuring premature death as Japanese have longer life expectancy.

Reference: PHO loksewa Easy Entry 2nd edition

35. Which of the following doesn't demonstrate Iceberg phenomenon?

a. Diabetes b. Hypertension
c. Rabies d. COPD

➲ *Iceberg phenomenon of disease Is not shown by:*
Rabies
Tetanus
Measles
Rubella

Reference: PHO loksewa Easy Entry 2nd edition

36. Exclusive breast feeding is indicated for:

a. 6 months b. 8 months
c. 10 months d. 12 months

37. If P value is 0.05 confidence interval is:

a. 60% b. 95%
c. 99% d. 100%

68%	+-1 SD
95%	+- 2 SD
99%	+-3DS

38. Soiling index is measure of:

a. Soil pollution b. Water pollution
c. Noise pollution d. Air pollution

39. Iron requirement is highest in:

a. 1st trimester b. 2nd trimester
c. 3rd trimester d. During lactation

➲ *Iron requirements are greater in pregnancy than in the nonpregnant state. Although iron requirements are reduced in the first trimester because of the absence of menstruation, they rise steadily thereafter; the total requirement of a 55-kg woman is approximately 1000 mg. Translated into daily needs, the requirement is approximately 0.8 mg Fe in the first trimester, between 4 and 5 mg in the second trimester, and >6 mg in the third trimester*

Reference: Bothwell, T. H. (2000). Iron requirements in pregnancy and strategies to meet them. The American journal of clinical nutrition, 72(1), 257S-264S.

Answer

29.d.	All	30.b.	Relative risk	31.a.	HIV patient less than 1% in total &> 5% in specified group
32.b	Number of female deaths per 100,000 live births	33.?		34.a	DALY= YLL (year of lost life) + YLD (years lost to disability)
35.c	Rabies	36.a.	6 months	37.b	95%
38.b	Air pollution	39.c.	3rd trimester		

Forensic Medicine:

40. Snake venom contains:

a. Phospholipase b. Agglutinins
c. Ophioxidase d. All of above

➲ *Snake venom contains cholinesterase, haemolysins, cardiotoxin, cytolysins, agglutinins, lecithinases, phospholipase, phosphatidases, ribonuclease, proteinases, protease, ophioxidase.*

References: The essentials of forensic Medicine and Toxicology by Reddy 33rd edition; Page 561

41. Science of projectile is known as:

a. Forensic ballistic
b. External ballistic
c. Internal ballistic
d. None

➲ *Forensic ballistic is science dealing with investigations of firearms, ammunition and problems arising from their use*
➲ *Internal ballistics is study of firearm and projectiles*
➲ *Exterior ballistics is study of motion of projectile after it leaves the gun barrel till the time it hits the target*
➲ *Terminal ballistics is study of behavaious of missiles once they penetrate their target*
➲ *Wound ballistics is study of missiles on living tissue*

Reference: The essentials of forensic Medicine and Toxicology by Reddy 33rd edition; Page 208

42. Last organ to putrify is:

a. Breast b. Prostate
c. Muscle d. Intestine

➲ *As a general rule, organs show putrefactive changes in the following order:*
1. *Larynx and trachea*
2. *Stomach, intestine pancrease and spleen*
3. *Liver,lungs*
4. *Brain*
5. *Heart*
6. *Kidneys, bladder*
7. *Prostate,uterus*
8. *Skin, muscle, tendon*
9. *Bones*

References: The essentials of forensic Medicine and Toxicology by Reddy 33rd edition; Page 168

43. If a virgin girl is raped. Which side of hymen will rupture?

a. Left lateral b. Right lateral
c. Anterior d. Posterior

42. b
43. d

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- Tearing usually occurs posteriorly at the side between 5 and 7'O clock position, but most frequently in middle line of hymen because hymen lies suspended across potential space, whereas anteriorly periurethetal tissue buttress hymen.

References: The essentials of forensic Medicine and Toxicology by Reddy 33rd edition; Page 419

44.McNaughten rule defines their

a. Public responsibility of insane
b. Criminal responsibility of insane
c. Social responsibility of Insane
d. Moral responsibility of insane

- McNaughten Rule implies "an accused person is not legally responsible, if it is clearly proved, that at the time of committing the crime, he was suffering from such a defect of reason from abnormality of mind, that he did not know the nature and quality of act he was doing, or that what he was doing was wrong".

References: The essentials of forensic Medicine and Toxicology by Reddy 33rd edition; Page 493

45.Manner of death in smothering is:

a. Suicidal
b. Accidental
c. Homicidal
d. All of above

- In smothering manner of death can be all of the above conditions.

References: The essentials of forensic Medicine and Toxicology by Reddy 33rd edition; Page 361

Answer					
40.d.	All of above	41.c.	Internal ballistic	42.b.	Breast
43.d.	Posterior	44.b.	Criminal responsibility of insane	45.d.	All of above

Orthopedics

46.Soap bubble appearance is seen in:

a. Ewing sarcoma b. Osteoclastoma
c. Osteosarcoma d. All

- Osteoclastoma also known as Giant cell tumor has characteristic radiological features as:
- A solitary may be loculated lytic lesion
- Eccentric location often subchondral
- Expansion of overlying cortex (expansile lesion)
- Soap bubble appearance- the tumor is homogeneously lytic with trabeculae of the remnant of bone traversing it, giving rise to loculated appearance.

Reference: Essential Orthopedics Maheshwori and Mhaskar 5th edition Page 237-238

47.On RTA attitude of right limb of patient flexon, adduction and internal rotation. What is likely diagnosis:

a. Fracture shaft of femur
b. Neck of femur fracture
c. Anterior dislocation of hip
d. Posterior dislocation of hip

Remember
- FADIR= Posterior dislocation: Flexon, Adduction, Internal rotation
- FABER= Anterior dislocation: Flexon, Abduction, External rotation

48.For club foot sequence of correction is:

a. Cavus, Adductus, Varus, Equinus
b. Cavus, Varus, Equinus, Adductus,
c. Cavus, Varus, Adductus,Equinus
d. Cavus, Adductus, Equinus

- Ponseti method of serial manipulation and casting
- Goal is to rotate foot laterally around a fixed talus
- Order of correction (CAVE)
  1. Cavus
  2. Adductus
  3. Varus
  4. Equinus

Reference: https:// www.orthobullets.com/ pediatrics/ 4062/ clubfoot-congenital-talipes-equinovarus

49.In case of Guardman's fracture, fracture of ..... bone occurs:

a. Radius b. Ulna
c. Tibia d. Mandible

- A guardsman fracture, also referred to as parade ground fracture, is one of the common forms of mandibular fracture which is caused by a fall on the midpoint of the chin resulting in fracture of the symphysis as well as both condyles.
- It is usually seen in epileptics, elderly patients and occasionally in soldiers (fall forwards due to syncope) and is known as guardsman fracture

Reference: https:// radiopaedia.org/ articles/ guardsman-fracture

50.Treatment of choice in stable length fracture of femur in children is:

a. Conservative b. IMIL
c. Plating d. K-wire fixation

- In children treatment is mostly by non operative methods. The technique of traction varies in different age groups.
- From birth to 2 years: Gallow traction
- From 2 years to 16 years by Hip spica

Reference: Essential Orthopedics Maheshwori and Mhaskar 5th edition Page 143

51.In midshafthumerus fracture injury occurs in ..... nerve

a. Radial b. Ulnar
c. Median d. Axillary

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➲ *Complications of humerus shaft fracture*
a. *Nerve Injury: The radial nerve is commonly injured in the fracture of humeral shaft.*
b. *Delayed and non union*
Reference: Essential Orthopedics Maheshwori and Mhaskar 5th edition Page 94

Answer

46.b.	Osteoclastoma	47.d	Posterior dislocation of hip	48.a	Cavus, Adductus, Varus, Equinus
49.d.	Mandible	50.a.	Conservative	51.c.	Median

Opthalmology

52. **Patient came to eye opd with complain of painful red eye. Which of the following is:**
a. Acute congestive glaucoma
b. Acute conjunctivitis
c. Corneal Ulcer
d. Keratitis

Differential diagnosis of red eye with no injury

	Conjunctivitis	Corneal ulcer	Acute Iritis	Acute glucoma
Eye	Usually both eyes	Usually one eye	Usually one eye	Usually one eye
Vision	Normal	Usually decreased	Often decreased	Marked decreased
Eye pain	Normal or gritty	Usually very painful	Moderate paion, light sensitive	Severe pain (Headache and nausea)
Discharge	Sticky	Watery	Watery	Watery
Conjunctiva	Generalised (variable) redness	Redness most marked around the cornea	Redness most marked around the cornea	Generalised redness
Cornea	Normal	Grey, white spot (fluroscein staining)	Usually clear, (heratic precipitates may be visible with magnification)	Hazy (due to fluid in the cornea)
Anterior chamber (AC)	Normal	Occasionally creamy fluid level in the anterior chamber (hypopyon)	Cells will bevisible with magnification	Shallow or flat
Pupil size	Normal and round	Normal and round	Small and can be irregular	Mid-dilated and oval
Introcular pressure (IOP)	Normal (but do not attempt to measuare IOP), NB Risk of infection	Normal (but do not attempt to measure IOP)	Normal or slightly raised	Raised
Photophobia	slight	Significant	Significant	None
Useful diagnostic sign/test	Discharge in both eyes with clear cornea, normal pupil and normal vision	White spot or mark on the cornea which stains with fluorescein	Small pupil which becomes irregular as it dilates	Very painful eye with poor vision and dilated pupil. Raised IOP and shallow AC.

References: Comprehensive Opthalmology by AK Khurana 6th edition; page no 158

53. **Farmer came to OPD with history of injury in right eye during field visit. O/E corneal ulcer is seen. Which drug is contraindicaated.**
a. Steroid
b. Topical antibiotice
c. Analgesics
d. Atropine

➲ *Steroid causes worsening of corneal ulcer and may even reactivate herpatic keratitis. It may also cause glaucoma and cataract.*
References: Comprehensive Opthalmology by AK Khurana 6th edition; page no 104

54. **A 2 year old boy was brought by his mother with excessive watery eye and on examination lacrimal sac was swollen. What will you do?**
a. Syringing
b. Refer to ophthalmologist
c. Do nothing
d. Steroid

➲ *Since it is a case of dacrocystitis, initial management is syringigng and antibiotic solution.*
References: Comprehensive Opthalmology by AK Khurana 6th edition; page no 393

52.b
53.a
54.a

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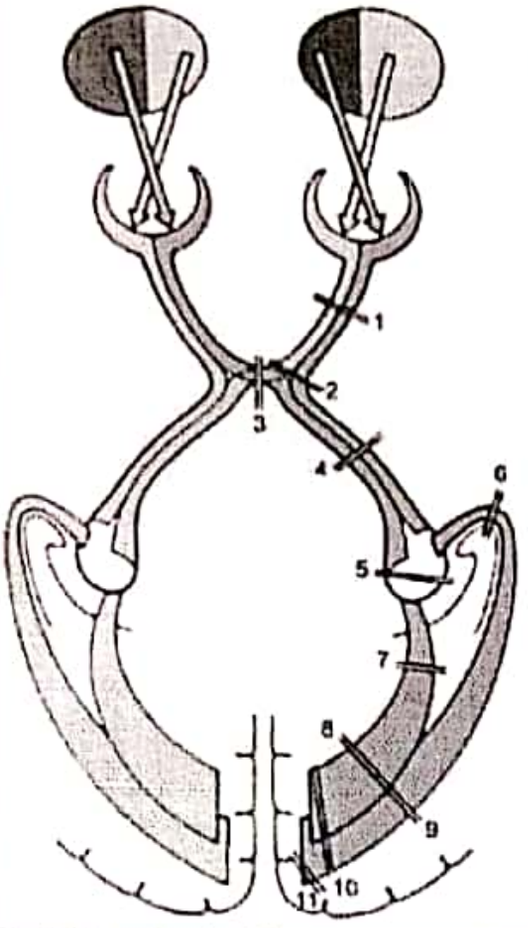
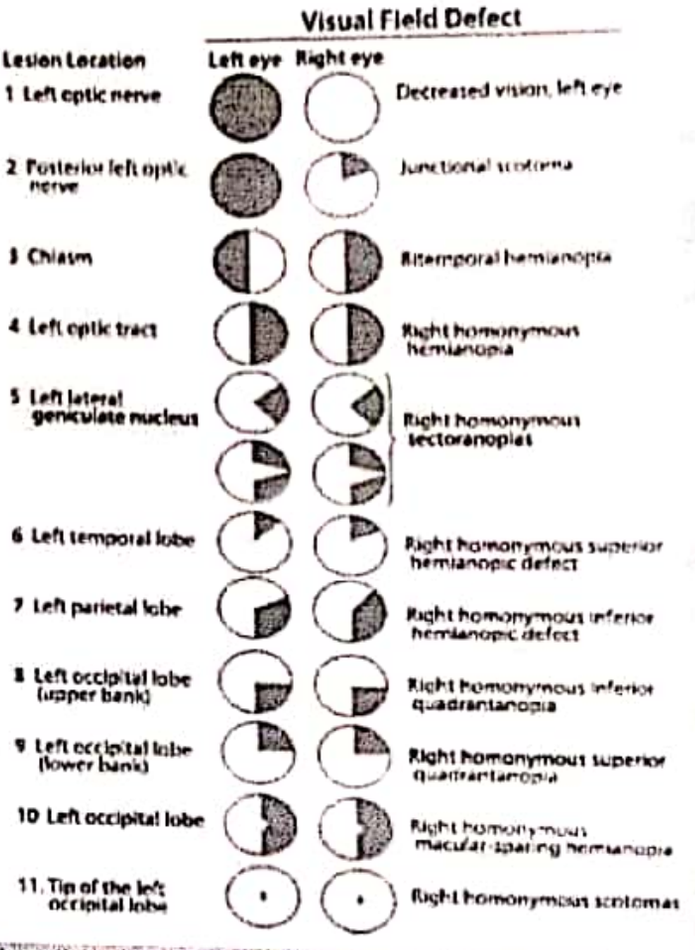
55 In right sided temporal lobe injury which side of vision will lost:

a. Upper nasal
b. Lower nasal
c. Ipsilateral
d. Contralateral





References: https://www.slideshare.net/NeurologyKota/approach-to-a-patient-with-bilateral-vision-loss

56 Squint is managed by:

a. Contact lens
b. Surgery
c. Both
d. Medical management

References: Comprehensive Opthalmology by AK Khurana 6th edition; page no 158

Answer					
52.b	Acute conjunctivitis	53.a	Steroid	54.a	Syringing
55.a	Upper nasal	56.c	Both		

Ear, Nose and Throat

57 Narrowest part of larynx in child

a. Supraglottic
b. Subglottic
c. Glottic
d. All are equal

➲ *The larynx of an infant differs considerably from that of an adult and has a great clinical significance.*

1. *Infant's larynx is positioned high in the neck level of glottis being opposite to C3 or C4 at rest and reaches C1 or C2 during swallowing. This high position allows the epiglottis to meet soft palate and make a nasopharyngeal channel for nasal breathing during suckling. The milk feed passes separately over the dorsum of tongue and the sides of epiglottis, thus allowing breathing and feeding to go on simultaneously.*
2. *Laryngeal cartilages are soft and collapse easily. Epiglottis is omega shaped and arytenoids relatively large covering significant portion of the posterior glottis.*
3. *Thyroid cartilage in an infant is flat. It also overlaps the cricoid cartilage and is in turn overlapped by the hyoid bone. Thus cricothyroid and thyrohyoid spaces are narrow and not easily discernible as landmarks when performing tracheostomy.*
4. *Infant's larynx is small and conical. The diameter of cricoid cartilage is smaller than the size of glottis, making subglottis the narrowest part. It has a bearing in the selection of paediatric endotracheal tube. In adults, subglottic-glottic dimensions are approximately same and larynx is cylindrical.*
5. *Submucosal tissues of infant's larynx are comparatively loose and easily undergo oedematous change with trauma or inflammation leading to obstruction.*

57. b

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References: Disease of Ear, Nose and Throat & Head and Neck Surgery ByDhingra 6th edition; page no 285

58. Multipal small perforation in TM is seen in:

a. TB
b. Syphilis
c. CSOM
d. ASOM

➲ *It is characterized by painless otorrhoea which fails to respond to the usual antimicrobial treatment, in a patient with evidence of tubercle infection elsewhere followed by multiple tympanic membrane perforations, abundant granulation tissue, and bone necrosis, preauricular lymph node enlargement.*

Reference: Mondal, S. K., &Alam, M. M. (2011). Tuberculous otitis media. Mymensingh medical journal: MMJ, 20(2), 343-348.

59. Best prognosis in laryngeal carcinoma is seen in:

a. Supraglotic
b. Glottic
c. Subglottic
d. All have same prognosis

➲ *There are few lymphatics in vocal cords and nodal metastases are practically never seen in cordal lesions unless the disease spreads beyond the region of membranous cord.*

References: Disease of Ear, Nose and Throat & Head and Neck Surgery ByDhingra 6th edition; page no 309

60. Incision is given in which part in ASOM:

a. Anteriosuperior
b. Anterioinferior
c. Posteriosuperior
d. Posterioinferior

➲ *In acute suppurative otitis media, a circumferential incision is made in the posteroinferior quadrant of tympanic membrane, midway between handle of malleus and tympanic annulus, avoiding injury to incudostapedial joint.*

Fig: (A) Circumferential incision used in acute suppurative otitis media (B) Radial incision used in serous otitis media

References: Disease of Ear, Nose and Throat & Head and Neck Surgery ByDhingra 6th edition; page no 398

61. Samters triad does not include

a. Nasal polyp
b. Asthma
c. Aspirin sensitivity
d. Diarrhoea

62. A patient has superior laryngeal nerve palsy. What will be the main complain

a. Hoarseness
b. Stridor
c. Aphonia
d. Aspiration

➲ *Presence of both paralysis and bilateral anaesthesia causesinhalation of food and pharyngeal secretions giving rise to cough and choking fits. Voice is weak and husky.*

References: Disease of Ear, Nose and Throat & Head and Neck Surgery by Dhingra 6th edition; page no 300

63. Cholesteotoma is present in:

a. Keratinizing squamous epithelium
b. Keratin debris
c. Both
d. None

➲ *Cholesteatoma consists of two parts: (i) the matrix, which is made up of keratinizing squamous epithelium resting on a thin stroma of fibrous tissues and (ii) a central white mass, consisting of keratin debris produced by the matrix*

References: Disease of Ear, Nose and Throat & Head and Neck Surgery by Dhingra 6th edition; page no 67

64. Best treatment modality of ethmoidal polyp is:

a. Medical management
b. FESS
c. Polypectomy
d. None

➲ *Ethmoidal polyp may be managed both medicily and surgical means but FESS remains as best treatment option.*

References: Disease of Ear, Nose and Throat & Head and Neck Surgery by Dhingra 6th edition; page no 67

65. Stenson's duct opens in:

a. Near second upper molar
b. Near second lower molar
c. Near incisor
d. Near canine

References: Disease of Ear, Nose and Throat & Head and Neck Surgery by Dhingra 6th edition; page no 67

Functional endoscopic sinus surgery (FESS)

Answer					
57.b.	Subglottic	58.a.	TB	59.b.	Glottic
60.d.	Posterioinferior	61.d.	Diarrhoea	62.d.	Aspiration
63.c.	Both	64.b.	FESS	65.a.	Ans: A

Anesthesia

66. In pregnancy for GA rate of induction

a. Increases
b. Decreases
c. No effect
d. First increases then decreases

➲ *Due to increased minute ventilation the induction with inhalational agent is faster and dose requirement is less Mking pregnant patient more susceptible to anaesthetic overdose.*

Reference: Short textbook of anaesthesia by Ajay yadav, 5th edition; page no 201

67. Which of the following contain ester?

a. Lignocaine
b. Prilocaine
c. Cocaine
d. Bupivacine

➲ *Classification (Based on structure of intermediate chain of the local anesthetic molecule)*

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Amino Esters	Amino Amides
• Cocaine	• Cinchocaine
• Procaine	• Lignocaine
• Chloroprocaine	• Mepivacaine
• Amethocaine	• Prilocaine
• Benzocaine	• Bupivacaine
	• Ropivacaine
	• Articaine

Reference: Short textbook of anaesthesia by Ajay yadav, 5th edition: page no 138

68. Intracranial cerebral blood flow is increased by

a. Ketamine
b. Thiopentone
c. Propofol
d. Etomidate

Reference: Short textbook of anaesthesia by Ajay yadav, 5th edition: page no 109

69. Side effect of succnyl choline includes all except:

a. Hyperkalemia
b. Decreases intraocular tension
c. Malignant hyperthermia
d. Increases intracranial tension

Reference: Short textbook of anaesthesia by Ajay yadav, 5th edition: page no 112

70. Position of cervical spine &atlanto occipital joint in intubation is:

a. Extension, flexion
b. Flexion, extension
c. Extension, extension
d. Flexon, flexon

➲ *Extension at atlanto-occipital joint and flexion at cervical spine*

Reference: Short textbook of anaesthesia by Ajay yadav, 5th edition: page no 43

71. Infiltration dose of regional anesthesia is:

a. 0.5-1%
b. 1-2%
c. 5%
d. 10%

Reference: Short textbook of anaesthesia by Ajay yadav, 5th edition: page no 143

72. Induction agent of choice in hypovolemic shock is:

a. Isoflurone
b. Propofol
c. Halothane
d. Ketamine

➲ *Ketamine stimulates sympathetic system causing tachycardia and hypertension making it an induction of choice in hypovolemic shock.*

Reference: Short textbook of anaesthesia by Ajay yadav, 5th edition: page no 101

73. Monophasic shock in ACLS is:

a. 200J
b. 360J
c. 400J
d. 1000J

➲ *360J with monophasic and 120-200J with biphasic*

Advanced cardiac life support

Reference: Short textbook of anaesthesia by Ajay yadav, 5th edition: page no 259

74. In mouth to mouth respiration, what % of oxygen is delivered:

a. 16
b. 21
c. 32
d. 42

➲ *The expired air contains 16-17% of oxygen which is available for patient.*

Answer

66.a.	Increases	67.c.	Cocaine	68.a.	Ketamine
69.b.	Decreases intraocular tension	70.b.	Flexion, extension	71.a.	0.5-1%
72.d.	Ketamine	73.b.	360J	74.a.	16

Dermatology

75. Honey coloured crust is seen in:

a. Impetigo
b. Pemphigus
c. Scabies
d. All

Reference: Illustrated synopsis of Dermatology and STDs by Neenakhanna, 4th edition; page no 245

76. Clinical features of cutaneous TB are all except:

a. Lupus vulgaris
b. Tuberculosis verrucosa cutis
c. Scrofuloderma
d. Verruca vulgaris

Reference: Illustrated synopsis of Dermatology and STDs by Neenakhanna, 4th edition; page no 252-255

77. Mitsuda reaction in leprosy denotes:

a. Delayed hypersensitivity reactions
b. Type I
c. Type II
d. Type III

➲ *Lepromin reaction consists of earlr or Fernandez reaction and delayed or mitsuda reaction*

Reference: Illustrated synopsis of Dermatology and STDs by Neenakhanna, 4th edition; page no 265

78. Auspitz sign is seen in:

a. Psoriasis
b. Lichen planus
c. Dermotitis
d. Pemphigus

➲ *Visible bleeding points on removal of glistening white adherent membrane (Burkley's Membrane) is known as auspitz sign.*

Reference: Illustrated synopsis of Dermatology and STDs by Neenakhanna, 4th edition; page no 42

79. All of the following are sexually transmitted except:

a. Candida albicans
b. Echinococcus
c. Moluscumcontagiosum

75.a 78.a
76.d 79.b
77.a

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d. Group B streptococcus

80. Norwegian scabies characterised by all except:

a. Involves palm and sole
b. Itching is present
c. Seen in immunocompromized
d. Caused by mite

Reference: Illustrated synopsis of Dermatology and STDs by Neenakhanna, 4th edition; page no 343

Answer					
75.a.	Impetigo	76.d.	Verruca vulgaris	77.a.	Delayed hypersensitivity reactions
78.a.	Psoriasis	79.b.	Echinococcus	80.a.	Involves palm and sole

Psychiatry

81. Which of the following is not used in alcohol withdrawl?

a. Disulfiram
b. Lorezepam
c. Diazepam
d. Thiamine

➲ *Disulfiram is a deterrent agent which causes disulfiram ethanol reaction (DER) and is used for treatment of alcohol dependence.*

Reference: A short textbook of Psychiatry, NeerajAuhuja 7th edition; page no 41

82. Which of the following is not included in Ichneider's first rank symptoms?

a. Audible thoughtsb Ambivalence
c. Somatic passivity
d. Thought broadcasting

➲ *Schneider formulated what he considered to be pathognomic of first rank symptoms of schizophrenia (Schneider, 1959).*

1. *Audible thoughts (voices speaking out his thoughts aloud)*
2. *Voices arguing (Rerferring to the patient in 3rd person)*
3. *Voices commenting on one's actions*
4. *Somatic passivity (experiencing externally controlled body changes*
5. *Thought withdrawal*
6. *Thought insertion*
7. *Thought broadcasting*
8. *Made volition*
9. *Made affect*
10. *Made impulse*
11. *Delusional perception (a renal percept elaborated in a delusional way)*

Reference: A short textbook of Psychiatry, NeerajAuhuja 7th edition; page no 55

83. All of the following are features of anorexia Nervosa except:

a. Predominantly seen in females
b. Loss of weight at time of presentation
c. Avoidance of high colorie foods
d. Amenorrhoea is rare

Reference: A short textbook of Psychiatry, NeerajAuhuja 7th edition; page no 142

84. Post traumatic stress disorder is characteristized by all except:

a. Flashback
b. Nightmares
c. History of traumatic event
d. Anxiety

Reference: A short textbook of Psychiatry, NeerajAuhuja 7th edition; page no 112

85. Drug of choice of generalized anxiety disorder is:

a. Venlafaxine
b. Alprazolam
c. β-blocker
d. Buspirone

➲ *DOC for generalized anxiety disorder have traditionally been benzodiazepins, and for panic disorder, antidepressants. Buspirone may be preferable to BZDs for long term management of anxiety disorder.*

Reference: A short textbook of Psychiatry, NeerajAuhuja 7th edition; page no 92

Answer					
81.a.	Disulfiram	82.b.	Ambivalence	83.d.	Amenorrhoea is rare
84.d.	Anxiety	85.b.	Alprazolam		

Dental Sciences:

86. Mixed dentation is present in:

a. 5-6 years
b. 10-15 year
c. 6 months
d. 20 years

Reference: Mixed dentation period begins at approximately six years of age with eruption of first permanent molars.

87. First permanent teeth to erupt is:

a. Central incisor
b. Molar
c. Canine
d. Px-molar

86. a 87. b

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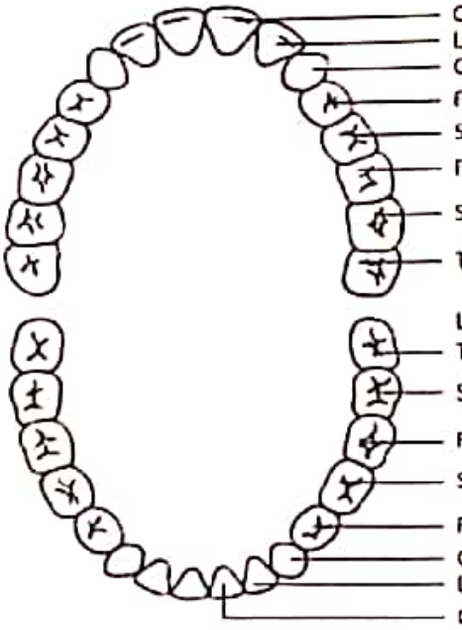

Upper Teeth	Erupt
Central incisor	7-8 yrs
Lateral incisor	8-9 yrs
Canine (cuspid)	11-12 yrs
First premolar (first bicuspid)	10-11 yrs
Second premolar (second bicuspid)	10-12 yrs
First molar	6-7 yrs
Second molar	12-13 yrs
Third molar (wisdom tooth)	17-21 yrs

Lower Teeth	Erupt
Third molar (wisdom tooth)	17-21 yrs
Second molar	11-13 yrs
First molar	6-7 yrs
Second premolar (second bicuspid)	11-12 yrs
First premolar (first bicuspid)	10-12 yrs
Canine (cuspid)	9-10 yrs
Lateral incisor	7-8 yrs
Central incisor	6-7 yrs

88. Operculectomy is indicated in:

a. Unerupted teeth b. Pericornitis
c. Adantoblastoma d. Gingivitis

➲ *Operculectomy is the surgical procedure of removing the operculum, or the flap of gum that partially covers a tooth. This procedure is done to treat pericoronitis, a condition characterised by pain and inflammation of the operculum.*

89. Premalignant condition of oral cavity is:

a. Leukoplaka b. Actirickertosis
c. Erythroplaka d. Candidiasis

Premalignant lesions	Premalignant conditions
Leukoplakia	Oral submucous fibrosis
Erythroplasia	Oral lichen planus
Leukokeratosis nicotina palatinae	Actinic keratosis
Candidiasis	Syphilis
Carcinoma in situ	Discoid lupus erythematosis
	Sideropenic dysphagia

90. Absolute contraindication of tooth extraction is:

a. Pregnancy
b. Central hemongioma
c. Rheumatic heart disease
d. Hypertension

➲ *The central hemangioma is a vascular neoplasm of endothelial origin and presence of hemangioma in either maxilla or mandible makes it a absolute contraindication of tooth extraction.*

Answer					
86.a.	5-6 years	87.b.	Molar	88.b.	Pericornitis
89.b.	Actirickertosis	90.b.	Central hemongioma		

Medicine:

91. Child Pugh score does not include:

a. Ascitis b. Albumin
c. Liver enzyme d. PT/INR
e. encephalopathy f. bilirubin (serum)

➲ *Child Pugh score is used for prognosis classification in case of liver cirrhosis. Score are given based on serum bilirubin level, encephalopathy, serum albumin, PT/ INR and ascites. 1 year survival of patient with CTP score >9 is 42% and so on for other scores.*

Reference: Davidson,s principle and practice of medicine, 22nd edition, page no: 944

92. A patient has rash on face, joint pain,oliguria& on investing thrombocytopenia is seen. What is diagnosis?

a. SLE b. HUS
c. HTH d. DM

91.c.	Liver enzyme	92.a.	SLE	93.a.	Bacterial meningitis
94.b.	ECG, aspiriin	95.b.	Ceftriaxone IV, 2 gm twice daily	96.b.	Anti-Hlis Ag
97.c.	Dehydration	98.a.	Right lower lobe	99. a	Iron deficiency

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SLICC Criteria

Clinical Features	Immunologic Features
Acute cutaneous lupus (maculopapular lupus rash, malar rash, photosensitive lupus rash, etc.)	High ANA concentration
Chronic cutaneous lupus (discoid rash, mucosal lupus, etc.)	High anti-dsDNA antibody concentration
Oral or nasal ulcers	Presence of anti-Sm
Nonscarring alopecia	Positive APA
Synovitis in ≥ 2 joints	Low complement (C3, C4, CH50)
Serositis	Direct Coombs test
Renal (urine protein or RBC casts)	
Neurologica (seizures, psychosis, others)	
Hemolytic anemia	
Leukopenia or lymphopenia (without an identifiable cause)	
Leukopenia or lymphopenia (without an identifiable cause)	Must have a total of 4 features with ≥ 1 clinical features and 1 Immunologic features or Biopsy-proven LN with anti-dsDNA antibodies or ANA
ANA: antinuclear antibody: APA: antiphopholipid antibody: dsDNA: double-strunded DNA: LN: lupus: nephritis: SLICC: Systemic Lupus International Collaborating Clinic: Sm: Smith: Source: Reference 1.	

References: https://www.uspharmacist.com/article/a-review-of-systemic-lupus-erythematosus

93.26 years male patient has photophobia, headache with neck stiffness & fever. On lumbar puncture showed high protein, low sugar & raised neutrophil. What is the probable diagnosis.

a. Bacterial meningitis
b. Viral mengitis
c. TB mengitis
d. Multiple Sclerosis

	Normal	Bacterial	Viral	Fungal/TB
Pressure (cmH_2O)	5-20	>30	Normal or mildly increase	
Appearance	Normal	Turbid	Clear	Fibrin web
Protein (g/L)	0.18-0.45	>1	<1	0.1-0.5
Glucose (mmol/L)	2.5-3.5	<2.2	Normal	1.6-2.5
Gram stain	Normal	60-90% Positive	Normal	
Glucose-CSF:Serum Ratio	0.6	<0.4	>0.6	<0.4
WCC	<3	>500	>1000	100-500
Other		90% PMN	Monocytes 10% have > 90% PMN 30% have > 50% PMN	Monocytes

References: Davidson,s principle and practice of medicine, 22nd edition; page no: 1154

94.A case of MI in rural setting, what should be the first investigation and management to be done:

a. Cardiac enzyme, PCI
b. ECG, aspiriin
c. ECG, PCI
d. Echo, aspirin

Ans: B

4.b.

➲ *In case of MI I rural seeting ECG should be first investigation to be done to establish whether it is MI or not and also to determine nature of MI; either STEMI OR NSTEMI. Once diagnosed, PCI is treatment of choice in STEMI if done within 2 hrs of diagnosis. Since PCI is not readily available, antiplatelet therapy with aspirin shows significant reduction in mortality. First tablet 300 mg orally should be given within 12 hrs followed by further doses.*

References: Davidson,s principle and practice of medicine, 22nd edition; page no: 591-595

95 Drug of choice & dose in gram negative meningitis is:

a. Ceftriaxone, IM, 2gm twice daily
b. Ceftriaxone IV, 2 gm twice daily
c. Cefotaxim IV, 2 gm twice daily
d. Ampicillin IV; 2 gm , QID

References: Davidson,s principle and practice of medicine, 22nd edition; page no: 1204

96 Which of the following is seen in HBV vaccinated person:

a. HbS Ag
b. Anti-HBs Ag
c. Anti-HBc Ag
d. Anti HBc Ag

91.c	Liver enzyme	92.a	SLE	93.a	Bacterial meningitis
94.b	ECG, aspiriin	95.b	Ceftriaxone IV, 2 gm twice daily	96.b	Anti-HBs Ag
97.c	Dehydration	98.a	Right lower lobe	99.a	Iron deficiency

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Interpretation of common serological patterns in HBV infection

Virus/ Antibody markers					
HBsAg	HBeAg	Anti-HBc	Anti-HBs	Anti-HBe	Interpretation
+	+	IgM	-	-	Acute HBV infection; highly infectious
+	+	igG	-	-	Late/Chronic HBV infection or carrier state; highly infectivity
+	-	IgG	-	+/-	Late/Chronic HBV infection or carrier state; infectious
-	+/-	IgM	+/-	+/-	Seen rarely in early acute HBV infections; infectious
-	-	IgG	+/-	+/-	Remote HBV infection; infectivity nil or very low
-	-	-	+	-	Immunity following HBV vaccine

References: Davidson,s principle and practice of medicine, 22nd edition; page no: 952

97.Weak and slow pulse is seen in:

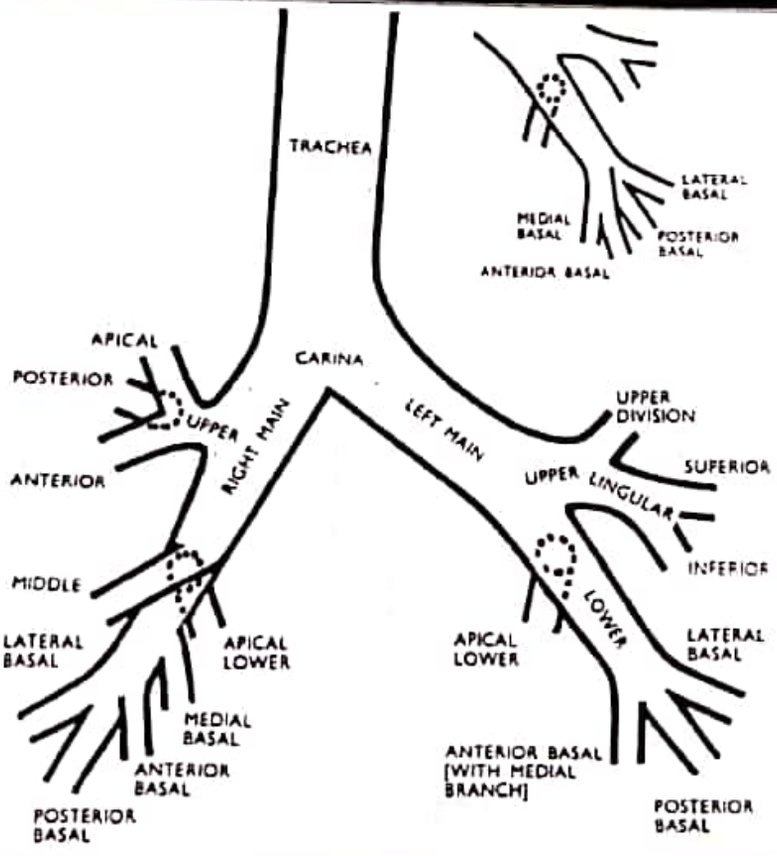
a. Atrial fibrillation
b. Septic shock
c. Dehydration
d. Heart block

➲ *Arterial fibrillation has irregularly irregular pulse with variation in pulse volume. Septic shock has hyperdynamic pulse and heart block has normal volume pulse which may be regular or irregular.*

References: Davidson,s principle and practice of medicine, 22nd edition; page no: 952

98.Most common locating for aspiration pneumonia in bed ridden patient is:

a. Right lower lobe
b. Right upper lobe
c. left Upper lobe
d. left lower lobe



91.c	Liver enzyme	92.a	SLE	93.a	Bacterial meningitis
94.b	ECG, aspirin	95.b	Ceftriaxone IV, 2 gm twice daily	96.b	Anti-HBs Ag
97.c	Dehydration	98.a	Right lower lobe	99. a	Iron deficiency

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➲ *Right bronchus is vertical and wider in comparision to left which is vertical and narrower so chances of aspiration is higher in right bronchus.*
References: Davidson,s principle and practice of medicine, 22nd edition; page no: 687

99. Most common cause of anemia in Nepal is:

a. Iron deficiency
b. Folic acid deficiency
c. Vit B_{12} deficiency
d. Thalassemia

References: NDHS 2016

Answer

91.c.	Liver enzyme	92.a.	SLE	93.a.	Bacterial meningitis
94.b.	ECG, aspirin	95.b.	Ceftriaxone IV, 2 gm twice daily	96.b.	Anti-HBs Ag
97.c.	Dehydration	98.a.	Right lower lobe	99. a	Iron deficiency

Pediatrics

100. Fluid of choice in newborn is:

a. D5 b. D10
c. RL d. NS

➲ *The initial fluid of choice should be 10% dextrose with no electrolytes in order to maintain a glucose infusion rate of 4-6 mg/kg/min.*
References: Ghai Essential Pediatrics, 8th Edition; page no 147

101. 23 months baby, fluid therapy in severe dehydration is:

a. 30% in 2 hours & 70% in next 5
b. 30% in ½ hr. & 70% in 2 & half
c. 30% in 2 hour & 70% in 2 & half
d. 30% in 2 hour & 70% in next 5

➲ *WHO Guidelines for intravenous treatment of children and adults with severe dehydration*

Start IV fluids Immediately. If the patient can drink, give ORS by mouth until the drip is set up.
Give 100 ml/kg Ringer's Lactate Solution as follows:

Age	First Give 30ml/kg in	Then give 70ml/kg in:
Infants	1 hours(b)	5 hours
Older	30 minutes (b)	2 ½ hours

Reassess the patient every 1-2 hours. If hydration is not improving, give the IV drip more raidly.

- After six hours (infants) or three hours (older patients), evaluate the patient using the assessment chart.
  The choose the appropriate Treatment Plan (A,B or C) to continue treatment.

a. If Ringer's Lactate Solution is not available, normal saline may be used).
b. Repeat once if radial pulse is still very weak or not detectable.

References: Ghai Essential Pediatrics, 8th Edition; page no 295

102. In WHO lowosmolar ORS K^+ content is:

a. 65 mmol/L b. 75 mmol/L
c. 20 mmol/L d. 10 mmol/L

➲ *Low-Osmolarity ORS Formulation Recommended by WHO/Unicef*

Ingredients	Grams/L	Ingredients	mmol/L
Sodium chloride	2.6	Sodium	75
Glucose (anhyd.)	13.5	Glucose	75
Potassium chloride	1.5	Potassium Chloride	20 65
Trisodium citrate	2.9	Citrate	10
Osmolarity = 245			

References: Ghai Essential Pediatrics, 8th Edition; page no 294

103. 8 months baby has high grade fever (101F), first episode of tonic clonic convulsion and uprolling of eyes. What would be probable diagnosis?

a. Fibrile convulsion b. Pyogenic meningitis
c. Viral meningitis d. Tubercular meningitis

➲ *Febrile seizure is a seizure that occur between age of 6 months to 5 years with temperature of 38C(100.4F) or higher that are not result of CNS infection or any metabolic imbalance and that occur in absence of history of prior afebrile seizure.*
➲ *It is of two types:*
i. Simple febrile seizure
ii. Complex febrile seizure
References: Ghai Essential Pediatrics, 8th Edition; page no 556

104. A child with bronchiolitis is managed by:

a. Neubilization b. Supportive medication
c. Both d. High dose of antibiotics

➲ *Treatment of bronchiolitis is essentially symptomatic with high flow oxygen supplementation, nebulization. There is no role of antibiotics and antiviral. But recent review have shown beneficial effects of inhaled bronchiodilatore.*
References: Ghai Essential Pediatrics, 8th Edition; page no 382

105. A child has recurrent respiratory tract infection & failure to thrive. Cause may be:

a. VSD b. ASD

100. b 103. a
101. b 104. c
102. c 105. a

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c. PDA d. None

➲ *Clinical features of VSD:*
Child become symptomatic around 6 to 10 weeks of age with CCF
Palpitation, dyspnoea on exertion and frequent chest infection
Hyperkinetic precordium with a systolic thrill
Pansystolic murmur at left sternal border
Failure to thrive
References: Ghai Essential Pediatrics, 8th Edition; page no 415

Answer

100.b.	D10	101.b.	30% in ½ hr. & 70% in 2 & half	102.c.	20 mmol/L
103.a.	Fibrile convulsion	104.c.	Both	105.a.	VSD

Surgery

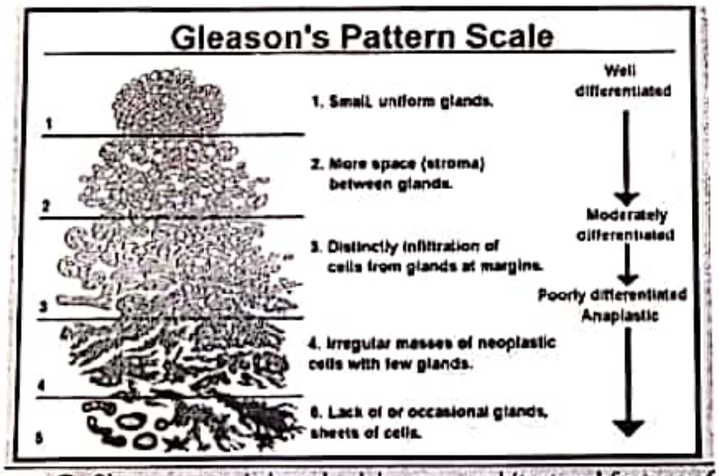
106. Osteoblastic metastasis is seen in which malignancy?

a. Breast b. Prostate
c. Liver d. Lung

➲ *Prostate is most common site of origin for skeletal metastases followed in turn by breast, kidney, bronchus and thyroid gland. Spread occur by bloodstream mostly involving Batson's Venous Plexus and involves pelvic bones and lower lumbar vertebrae.*
References: Bailey and love's short practice of surgery 26th edition; page no 1352

107. About gleason score all are true except:

a. Used for prostate cancer
b. Have 10 score
c. Higher score lower the risk
d. Based on architectural feature of prostate cancer cells



➲ *Gleason score is based solely upon architectural feature of prostate cancer cells. A higher score indicate greater likelihood of having no organ confined disease. Composite gleason sore is derived by adding together two of the most prevelantdifferentiationpatterns.*
References: SRB'S manual of surgery 4th edition; page no 1126https://www.prostateconditions.org/about-prostate-conditions/prostate-cancer/newly-diagnosed/gleason-score

108. A patient underwent cholecystectomy for syptomaticcholelithiasis& specimen was sent for histopathology & report suggested malignancy confined to muscularis. What is the next best step of management?

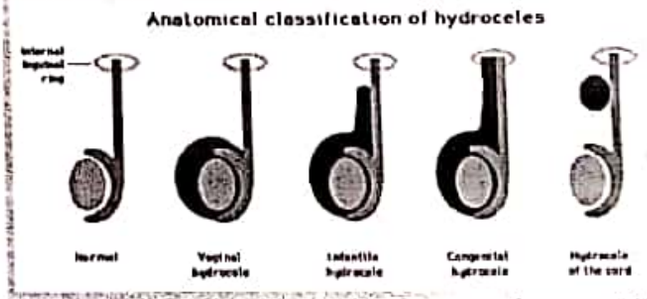
a. Radical en-bloc resection
b. Hepatectomy
c. Radiotherapy
d. No further treatment

➲ *In case of malignancy diagnosed after post cholecystectomy for early disease confined to mucosa or muscle of gall bladder no further treatment is required. However, for transmural disease, a radicl en-bloc resection of gall bladder fossa and surrounding liver along with regional lymph nodes should be performed.*
References: Bailey and love's short practice of surgery 26th edition; page no 1117

109. 2 year males child presented with congenital hydrocele. What is the next step of management?

a. Eversion of sac b. Lord's plicatron
c. Herniatomy d. Aspiration of fluid

➲ *Congenital hydrocele is treated by herniotomy if they do not resolve spontaneously.Lord's plication is suiatable when the sac is reasonably thin walled. Aspiration is suitable for those who are unfit for scrotal surgery although refillinf do occurs.*



References: Bailey and love's short practice of surgery 26th edition; page no 1382

110. Full thickness graft is taken from:

a. Calf b. Elbow
c. Thigh d. Postauricular region

➲ *Full thickness graft may be harvested from upper eyelid, pre auricular and post auricular region, nasolabial fold, supraclavicular fossa, groin creases and neck ehere easy direct closure of donor site is possible.*

106. b
107. b
108. d 110. a
109. c

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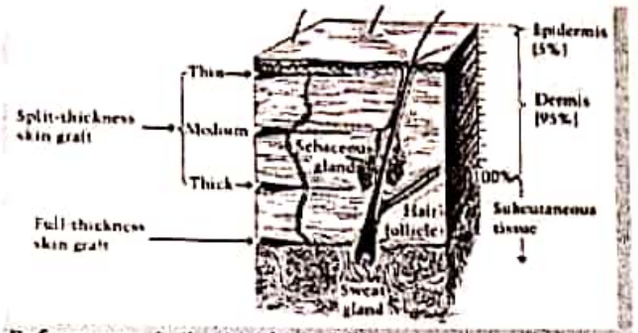

References: Bailey and love's short practice of surgery 26th edition; page no 407

111. True about Buergers disease is:

a. history of tobacco use
b. Mostly involve distal extremsty
c. Large arteries are spared
d. All of above

➲ *Buergers disease aka thromboangitisobliterans has following clinicl features:*
Occlusive diasease of small and medium sized distal arteries
Thrombophlebitis of superficial or deep veins
raynaud's syndrome
Mostly seen in male smoker usually under 30 yrs of age
References: Bailey and love's short practice of surgery 26th edition; page no 899

112. TNm staging of breast cancer of 3cm mass with axillary lymph Node metastasis is:

a. $N_1N_1M_0$ b. $T_2N_1m_1$
c. $T_2N_1M_0$ d. $T_2N_2M_0$

Tumor size **T**	Tumor size < 2 cm T1	Tumor size 2-5 cm T2	Tumor size > 5 cm T3	Tumor extends to skin or chest wall T4
Lymph Nodes **N**	**N0** No lymph node metastasis	**N1** Metastasis to ipsilateral, movable, axillary LNs	**N2** Metastasis to ipsilateral fixed axillary, or IM LNs	**N3** Metastasis to infraclavicular/ supraclavicular LN, or to axillary and IM LNs
Metastasis **M**	**M0** No distant metastasis	**M1** Distant metastasis	LNs= Lymph Nodes; IM= Interaal Mammary	

Answer

106.b.	Prostate	107.c.	Have 10 score	108.d.	No further treatment
109.c.	Herniatomy	110.a.	Calf	111.d.	All of above
112.c.	$T_2N_1M_0$				

Gynaecology & Obstetrics:

113. Evidence based preconception therapy is:

a. Zinc b. Folic acid
c. Iron d. Calcium

➲ *Neural tube defects (NTDs) are common complex congenital malformations resulting from failure of the neural tube closure during embryogenesis. It is established that folic acid supplementation decreases the prevalence of NTDs, which has led to national public health policies regarding folic acid.*
References: Imbard, A., Benoist, J. F., &Blom, H. (2013). Neural tube defects, folic acid and methylation. International journal of environmental research and public health, 10(9), 4352-4389.

114. Screening test for cervical malignancy in Nepal is:

a. Pap smear b. Endometrial biopsy
c. Cone biopsy d. Bunch biopsy

➲ *Benefits of Pap Smear*
➲ *It reduces the incidence and mortality from cervical smear in the lifetime. Even a single smear in lifetime if appropriately timed will produce some benefits. If extended to high risk group reduces the chance by 60%.*
➲ *Pap smear test has been effective reducing the incidence of cervical cancer by 80% and mortality by 70%.*
Reference: DC Dutta's Text book of gynaecology 7th edition page 111

115. Contraction of uterus after induction of labour by oxytocin must be:

a. 3 contraction in 10 minutes each of 45 seconds
b. 5 contraction in 10 minutes each of 30 seconds
c. 3 contraction in 5 minutes each of 45 seconds
d. 5 contraction in 5 minutes each of 30 seconds

➲ *Because of the safety the oxytocin must be started in low dose and is escalated at an interval of 20-30 mins where there is no response. When optimal response is achieved (uterine contraction sustained for about 45 seconds and numbering 3 contractions in 10 mins)*
Reference: DC Dutta's text book of Obstetrics 7th edition Page 500

116. A patient of irregular menstrual cycle with excessive bleed done hysterectomy and specimen was sent for biopsy which reports of whorled trabeculae cut surface present on intramural and submucosa. What is diagnosis?

a. Leiomyoma b. Adenomyosis
c. Poly P d. Endometriosis

➲ *Cut surface of tumor is smooth and whitish. The cut surface in absence of degenerative changes, shows features of whorled appearance and trabeculation. These*

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are due to intermingling of fibrous tissues with the muscle budles.
Reference: DC Dutta's Text book of gynaecology 7th edition page 274

117. What will be the sign of uterine rupture?

a. Something giving away at height of uterine contraction
b. Decreased BP & Increased Pulse
c. Recession of presenting part
d. All of the above

Diagnosis of rupture uterus
1. *There is something giving way at the height of uterine contraction*
2. *The constant pain is changed to dull aching pain with cessation of uterine contractions*
3. *General examination reveals features of exhaustion and shock*
4. *Abdominal examination reveals superficial fetal parts, absence of FHS and absence of uterine contour.*
5. *Vaginal examination reveals recession of presenting parts and varying degree of bleeding.*

Reference: DC Dutta Textbook of Obstetrics Page 429

118. What is the most common cause of PPH?

a. Uterine atonicity
b. Retained placenta
c. Trauma
d. Coagulopathy

Causes of postpartum hemorrhage are:
1. *Atonic Uterus (80%). It is the most common cause of postpartum hemorrhage.*
2. *Traumatic(20%) It occurs usually after operative delivery; even after spontaneous delivery.*
3. *Retained tissue*
4. *Coagulopathy*

Reference: DC Dutta s Text book of Obstetrics Page 410-411

119. All of the following are protected by barrier method except:

a. Chlamydia
b. HPV
c. HIV
d. Treponema

Advantages of condoms: Protection against sexually transmitted diseases eg gonorrhea, chlamydia, HPV and HIV(Syphilis is not included)
Reference: DC Dutta's Text book of Gynaecology

Condoms can be used to reduce the risk of catching syphilis, but cannot prevent it altogether. Some risk remains via exposure to the mouth (those having oral sex) or via anus (those having anal intercourse). It is important to use a condom during vaginal, oral and anal sex.
Reference: https://www.news-medical.net/health/Syphilis-Prevention.aspx

120. Contraception of choice in post-partum lady who is breast feeding her baby is:

a. Barrier
b. Natural
c. OCP
d. IUCD

121. Which measures protects prolongation of labor?

a. Partograph
b. CTG
c. USG
d. CPD

122. Regimen for eclampsia is:

a. Prichard regimen
b. OschnerShrenn Regimen
c. Both
d. None

Prichard regimen:
Loading dose: 4 gm IV over 3-5 mins followed by 10 gm deep deep IM (5 gm in each buttock)
Maintenance dose: 5 gm IM 4 hourly in alternate buttock
Reference: DC Dutta Text Book of Obstetrics 7th edition Page 235

123. Which of the following is a preventable cancer?

a. Cervical
b. Endometrial
c. Ovarian
d. Breast

This carcinoma can be prevented by immunization and change in lifestyle. Also effective screening measures are available which has been effective reducing the incidence of cervical cancer by 80% and mortality by 70%.
Refrence: DC Dutta's Text book of gynaecology 7th edition

124. Post menopausal bleeding, M/C is:

a. Poly
b. Atrophy
c. Endometrial Ca.
d. None.

The significance of post menopausal bleeding what ever slight it may be should never be underestimated. As many as one third cases are due to malignancy.The same importance is given to case where menstruation continues beyond 55 years. Common causes of post menopausal bleeding.
a. Genital malignancy
b. DUB
c. Senile endometriosis
d. Decubitus ulcer
Reference: DC Dutta's Text book of gynaecology 7th edition Page 559

Answer

113.b.	Folic acid	114.a.	Pap smear	115.a.	3 contraction in 10 minutes each of 45 seconds
116.a.	Leiomyoma	117.d.	All of the above	118.a.	Uterine atonicity
119.d.	Treponema	120.d.	IUCD	121.a.	Partograph
122.a.	Prichard regimen	123.a.	Cervical	124.c.	Endometrial Ca.

CSQ:

A. ABG was done in patient which showed Na: 138 K^+ 3 HCO_3^-: 19 &Cl: 79, pH: 7.3 PCO_2: 32 & PO_2: 80%

125. What is type of disorder

a. Metabolic acidosis
b. Metabolic alkalosis

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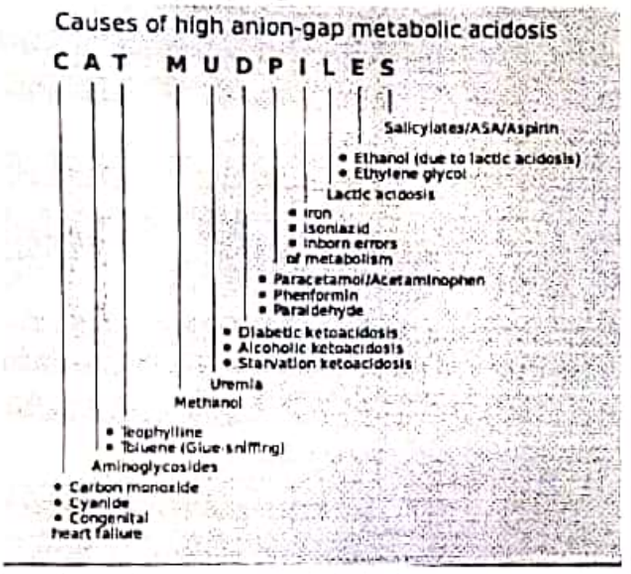
c. Respiratory acidosis
d. Respiratory alkalosis

ABG	pH	PaCO2	HCO3
Respiratory Acidosis	↓	↑	normal
Respiratory Alkalosis	↑	↓	normal
Metabolic Acidosis	↓	normal	↓
Metabolic Alkalosis	↑	normal	↑

126. What is the common cause of increased anion gap?

a. Salicylate poisoning
b. tricyclic poisoning
c. AKI
d. mushroom poisoning



127. What is the anion gap in above case:

a. 30 b. 32
c. 43 d. 34

➲ *Anion Gap: $[Na^+] + [K^+] - ([Cl^-] + [HCO^{-3}])$*

128. Which of the following causes normal anion gap:

a. Diabetic ketoacidosis
b. Lactic Acidosis
c. Renal Failure
d. Renal tubular acidosis

129. Management of metabolic alkalosis includes:

a. Intake of exogenous organic acids
b. Diuretics
c. Infusion of Normal saline
d. Infusion of NS with potassium

➲ *Metabolic acidosis most commonly occur due to hypovolumia and inorder to maintain pH there is extracellular shift of H^+ and intracellular shift of K^+.*
Reference: Davidson's principle of Medicine; 22nd edition page no 447

Answer					
125.a.	Metabolic acidosis	126.a.	Salicylate poisoning	127.c.	43
128.d.	Infusion of NS with potassium				

B. A 8 years old child presents with high grade fever pain & swelling around right knee without h/o trauma. He has mild effusion around joint & is unable to move right limb.

129. What is your provisonal diagnosis?

a. Acute osteomyelitis
b. Septic arthritis
c. Rheumatic arthritis
d. Reactive arthritis

130. Which organism is most common cause?

a. Staph aureus b. E. coli
c. Streptococus d. Klebsiella

131. What is the investigation of choice?

a. X-ray b. Fluid tapping
c. USG d. CT scan

132. What is the management?

a. Arthodesis
b. Arthoplasty
c. Antibiotics & supportive care
d. None

133. What is the complication?

a. Septic shock b. Dehydration
c. Joint deformity d. All of the above

Reference: Apley's system of orthopaedics and fractures, 9th edition; page no 43-45

Answer					
129.b.	Septic arthritis	130.a.	Staph aureus	131.c.	USG
132.c.	Antibiotics & supportive care	133.c.	Joint deformity		

C. A female was found dead alone in hotel room with cut injury over neck & a suicide note inside:

134. How will police investigation start

a. Through sucide note
b. By examination of clothes &seene

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c. Investigating friends
d. All of above

135. All may be cause of death except

a. Neurogenic shock
b. Asphyxia
c. Venous Air embolism
d. Hemorrhagic shock

136. If the patient has oblique wound, what will be your final diagnosis in post mortem report.

a. Self cut injury (Suicide)
b. Hemicidal
c. Accidental cut injury
d. Fall injury

➲ *Mostly suicidal wound are oblique and homicidial wound are transverse.*

137. In suicidial cut-throat injury, level of wound is:

a. Below thyroid cartilage
b. Above thyroid cartilage
c. Above hyoid bone
d. Below hyoid bone

138. Characteristics of suicidal cut throat injury is:

a. Ragged edges b. Tailing
c. Oblique wound d. All of above

Feature	Suicidal	Homicidal
Situation	Left side, passing front (rt. hand)	On sides
Level	Above thyroid cartilage	On or below
Direction	Above downwards & lt to rt	Transverse/ below upwards
Edges	Ragged due to nesitation mark	Sharp & clean cut
Hesitation cuts	Multiple at head	Absent
Severity	Less severe	More severe
Tailing	Present	Absent
Vessels	Carotid art do not injured	Jugular and carotid cut

Answer					
134.d.	All of above	135.b.	Asphyxia	136.a.	Self cut injury
137.b.	Above thyroid cartilage	138.d.	All of above		

D. If one patient has one previous classical CS & one LSCS then: lower Segment cesarean section

139. What is the success of VBAC? Vaginal birth after cesarean.

a. 90% b. 70%
c. 40% d. 40%

➲ *Cahill A., Tuuli, M., Odibo, A. O., Stamilio, D. M., &Macones, G. A. (2010). Vaginal birth after caesarean for women with three or more prior caesareans: assessing safety and success. BJOG: An International Journal of Obstetrics &Gynaecology, 117(4), 422-428.*

140. What is the absolute indication of CS?

a. Broad ligament fibroid
b. Central placenta prenia
c. Cephalopelvicdisporportion
d. All of above

Indications for Caesarean section

Absolute

Maternal
- *Cephalo-pelvic Disproportion*
- *Non progression of labour*

Fetal
- *Fetal Distress*
- *Non-cephalic presentations*
- *Multiple gestations*

Pregnancy Related
- *Abruptio Placenta*
- *Grade 3 or 4 Placenta Previa*
- *Cervical obstructive lesions*
- *Large vulvar condylomata*

Relative

Maternal
- *Relative CPD*
- *Mateernal preference*

Fetal
- *Twins with first in non cephalic presentation*

Pregnancy Related
- *Lesser degrees APH*
- *Previous Caesarean*

141. Total duration of oral iron supplementation after LSCS is:

a. 3 wks b. 6 wks
c. 7 wks d. 9 wks

➲ *Oral iron should be supplemented for 6 weeks following delivery both in normal vaginal delivery and caeserian delivery.*

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142. Soft diet is started on:

a. Day 1 b. Day 2
c. Day 3 d. Day 4

Day 1: liquid diet
Day 2: soft diet
Day 3: Light Solid diet

143. Following transverse incision stitches removal is done on:

a. D4 b. D5
c. D6 d. D7

➲ *Stitches removal on D5 in transverse and on D6 in longitudinal incision.*

Reference: DC Dutta's Text Book of Obsterics, 7th edition; page no 595

Answer					
139.b.	70%	140.d.	All of above	141.b.	6 wks
142.b.	Day 2	143.b.	D5		

E. A 10 years boy presents with abdominal pain, oliguria, facial, puffiness & swelling of lower extremities. He also gives H/O passing cola colored urine.

144. What is probable diagnosis:

a. HUS b. Nephrotic syndrome
c. PSGN d. MCD

145. What history will you have to extract from patient party:

a. Recent skin lesion b. Fever
c. Arthritis d. Chorea

146. The most important investigation is:

a. USG b. Urine albumin
c. C_3 level d. urine RME

147. The boy suddenly falled with vacant stare & stiffing of limbs. The most probable cause is:

a. Epilepsy
b. Thromboembolic phenomenon
c. HTN
d. Hypoglycemia

148. What is the likely prognosis of this condition:

a. Usually good
b. Fatal
c. Can't be determined
d. Grevious

Answer					
144.b.	Folic acid	145.a.	Pap smear	146.a.	3 contraction in 10 minutes each of 45 seconds

F. A baby was delivered at 32 weeks of gestation with weight of 1350 gm suffered from shortness of breath. On X-ray glass ground opacities seen:

147. What is the most probable diagnosis:

a. Meconium aspiration syndrome
b. Transient tachypnea of newborn
c. Tracheoesophaqeal fistula
d. HMD

148. What is the diagnostic investigation:

a. Chest x-ray b. USG
c. CT d. MRI

149. What is the cause of above condition:

a. Surfactant deficiency
b. Infection
c. meconium stained liquor
d. Post maturity

150. Treatment of this condition is:

a. Intubation
b. Bag & mask ventilation
c. Surfactant therapy
d. Wait & watch

151. For the prevention of this condition steroid is given:

a. To mother before delivery
b. To mother after delivery
c. To child after delivery
d. To mother & child after delivery

➲ *The most common cause of respiratory failure in preterm infants formerly known as hyaline membrane disease. Surfactant deficiency leads to poor lung compliance, alveolar collapse and atelectasis. Risk factor include maternal DM, male gender and second born of the twin.*
➲ *Diagnosis is made on background of clinical findings and characteristic x-ray findings. Glass ground appearance, air bronchogram and lack of focal opacities.*
➲ *Treatment: CPAP, Surfactant therapy.*

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➲ *Prevention: Administration of steroid to mother 24 hours before delivery*

Reference: USMLE Step 2 CK 406-407

Answer					
147.d.	HMD	148.a.	Chest x-ray	149.a.	Surfactant deficiency
150.c.	Surfactant therapy	151.a.	To mother before delivery		

G. A 55 year old female with CMP 5 years ago presents with a chief complaint of vaginal spotting. Her spotting is not related to sexual activity. She complains of burning sensation in vagina. She denies any medical conditions and is not on any medications. Pelvic exam reveals a dry vagina with decreased rugae.

152. What could be possible provisional diagnosis?

a. Cervical carcinoma
b. Endometrial TB
c. Postmenopausal HRT
d. Adenomyosis

➲ *Menstrual abnormalities in the form of contact bleeding or bleeding on straining, Intermenstrual bleeding are very much suspicious especially over 35.*

Reference: DC Dutta Text book of gynecology page 345

153. Pap smear is useful in diagnosis of all except:

a. Gonorrhea
b. Trictomonasvaginalis
c. Human Papillema virus
d. Inflammatory changes

➲ *A number of infectious processes including yeast, candidiasis, HSV and trichomoniasis can also be detected. However it is not very sensitive at detecting these infections, so the absence of these infections does not rule them out.*

154. Transvaginal USG reveals endometrial thickness of 8.0 mm. The next step management of this patient is:

a. Hysterectomy
b. Start progesterone therapy
c. Histopathological examination & curettage
d. Follow up sonography

➲ *Post menopausal woman with endometrial thickeness>5 mm require histopathological examination of the endometrium which can be performed by 'Hyseroscopy and endometrial biopsy'.*

155. Staging of most of gynecological carcinoma is done surgically except on of following in which staging is done clinically:

a. Ovarian carcinoma
b. Tubal carcinoma
c. Endometrial carcinoma
d. Cervical carcinoma

➲ *Staging of cervical cancer is based principally on clinical examination.*

Reference: DC Dutta Text book of Gynaecology Page 341

156. What is ideal treatment of this female with if pathology reveals simple hyperplasia of endometrium with atypia?

a. Simple hysterectomy
b. Medroxy progesterone acetate (MPA)
c. Levonorgesterol (LNG)
d. IUCD

Answer					
152.a.	Cervical Carcinoma	153.a.	Gonorrhea	154.c.	Histopathological examination & curettage
155.d.	Cervical carcinoma	156.a.	Simple hysterectomy		

11. 11 months child with history of loose stool and vomiting for multiple episodes is unconscious at time of presentation to ER department.

157. What is the fluid status of patient?

a. No dehydration b. Some dehydration
c. Severe dehydration d. Can't be determined

158. Best choice of fluid to be given is:

a. NS b. DNS
c. RL d. Isolyte P

159. Treatment plan in this child should be:

a. 30 ml/kg in ½ hr then 70 ml/kg in 2. ½ hr
b. 50 ml/kg in ½ hr then 50 ml/kg in 2 ½ hr
c. 30 ml/kg in 1 hr then 70 ml/kg in 5 hr
d. 30 ml/kg in 1 hr then 70 ml/kg in 2 ½ hr

160. Concentration of Glucose in low osmolality ORS is:

a. 75 mmol/L b. 20 mmol/L
c. 65 mmol/L d. 10 mmol/L

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Composition of WHO recommended ORS

Osmole or Ion	Mmol/L
Sodium	75
Chloride	65
Glucose	75
Postassium	20
Citrate	10

Reference: OP Ghai Essential Pediatrics 8th edition page 294

161. Role of zinc in management of diarrhea is

a. Improves absorption of water and electrolytes
b. Improves regeneration of intestinal epithelium
c. Inhibits toxin induced chlorea
d. All of above

Answer					
157.c.	Severe dehydration	158.c.	RL	159.c.	30 ml/kg in 1 hr then 70 ml/kg in 5 hr
160.a.	75 mmol/L	161.d.	All of above		

I. A woman (pregnant) with h/o antiphospholipid syndrome & SLE with multiple previous, abortion presented in OPD.

162. Clinical feature of SLE include:

a. Fatigue
b. Weight loss
c. Arthritis
d. All of above

163. Flaring of SLE occurs mainly in:

a. First half of pregnancy
b. Puerperium
c. Both a & b
d. 3rd trimester

164. What is mainstay of treatment of SLE in pregnancy?

a. Aspirin
b. Azathioprine
c. Corticosteroid
d. Methotrexate

165. In Anti-phospholipid syndrome antibodies:

a. Prevent physiological change in decidual vessels
b. Causes physiological change in decidual vessels
c. Decrease level of thromboxane
d. Release of prostacylin.

166. In Antiphospholipidsyndrome .....are to be estimated:

a. Antiphospholipid antibodies
b. Lupus anti-coagulant
c. Anti-cardiolipin antibodies
d. All of the above

- *Clinical features of SLE are: fatigue, weight loss, arthralgia and myalgias. Joint pain are often migratory in nature.*
- *Effect of pregnancy on SLE: Long term prognosis remains unaffected. There is a chance of flare up during first half and maximum in puerperium. Majority of the maternal deaths occurs in puerperium the cause being pulmonary hemorrhage.*
- *Investigation: Antinuclear antibodies are the standard test for the disease. Presence of antibodies to double stranded DNA is highly specific to diagnosis. Other antibodies for disgnosis are lupus anticoagulant, antiphospholipid antibodies.*
- *Management: Preconception planning is extremely important since conception during a period of quiescence is most likely to result in live birth. Corticosteroid are the mainstay of treatment.*

Reference: DC Dutta's textbook of Obstetrics 7th edition Page 292-293.

Answer					
162.d.	All of above	163.c.	Both a & b	164.c.	Corticosteroid
165.a.	Prevent physiological change in decidual vessels	166.d.	All of the above		

J. A housewife presented with thyroid swelling, weight loss (often accompanied by an increased appetite), anxiety, heat intolerance, hair loss (especially of the outer third of the eyebrows), muscle aches, weakness, fatigue, hyperactivity, irritability and palpitation.

167. The most likely diagnosis is:

a. Hypothyroidism
b. Hyperthyroidism
c. Cystic hygroma
d. Thyroglossal cyst

168. The immediate management of this case is:

a. Propranolol
b. Surgery
c. Beta 2 agonist
d. Levothyroxine

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169. Lab investigation shows ..... TSH:

a. Increased
b. Decreased
c. No change
d. No constant finding

170. Most common cause of hyperthyroidism is:

a. Graves's disease
b. Multinodulargoiter
c. Toxic adenoma,
d. Inflammation of the thyroid

171. Radio ablation is done by

a. Iodine 131 b. Iodine 132
c. Iodine 133 d. Iodine 134

- *Hyperthyroidism is the condition that occurs due to excessive production of thyroid hormone by the thyroid gland.*
- *Signs and symptoms vary between people and may include irritability, muscle weakness, sleeping problems, a fast heartbeat, heat intolerance, diarrhea, enlargement of the thyroid, hand tremor, and weight loss. Symptoms are typically less in the old and during pregnancy. An uncommon complication is thyroid storm in which an event such as an infection results in worsening symptoms such as confusion and a high temperatureand often results in death.*
- *Graves' disease is the cause of about 50% to 80% of the cases of hyperthyroidism in the United States. Other causes include multinodular goiter, toxic adenoma, inflammation of the thyroid, eating too much iodine, and too much synthetic thyroid hormone.*
- *The diagnosis may be suspected based on signs and symptoms and then confirmed with blood tests. Typically blood tests show a low thyroid stimulating hormone (TSH) and raised T3 or T4.*
- *There are three main treatment options: radioiodine therapy, medications, and thyroid surgery. Radioiodine therapy involves taking iodine-131 by mouth which is then concentrated in and destroys the thyroid over weeks to months.*
- *Medications such as beta blockers may control the symptoms, and anti-thyroid medications such as methimazole may temporarily help people while other treatments are having effect. Surgery to remove the thyroid is another option.*

Reference: https://en.wikipedia.org/wiki/Hyperthyroidism

Answer

167.b.	Hyperthyroidism	168.a.	Propranolol	169.b.	Decreased
170.a.	Graves's disease	171.a.	Iodine 131		

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Anatomy

1. **Uteroplacental Circulation gets established at:**
   a. 2nd week of gestation b. 3rd week of gestation
   c. 4th week of gestation d. 5th week of gestation

   ➲ *Uteroplacental circulation begins on day 13 of gestation once the formation of primary villi is completed*

   *(**Source**: Langman's Medical Embryology 12th edition Page 46)*

2. **Nerve of posterior compartment of arm is:**
   a. Median Nerve
   b. Ulnar Nerve
   c. Radial Nerve
   d. Musculocutaneous Nerve

   ➲ *Nerve of Anterior Compartment of Arm: Musculocutaneous Nerve*

   ➲ *Nerve of Posterior Compartment of Arm: Radial Nerve* (Posterior interosseous nerve of ↓)

   *(**Source**: Moore's Clinically Oriented Anatomy 7th Edition Page no 738)*

3. **Neurosecretory cells in Posterior pituitary are known as:**
   a. Hassal's Corpuscles b. Herring Bodies
   c. Corpora Amylacea d. Corpora arenaceum

   ➲ *Hassal's(Thymic) Corpuscles are structures found in the medulla of the human thymus, formed from eosinophilic type VI epithelial reticular cells arranged concentrically. These concentric corpuscles are composed of a central mass, consisting of one or more granular cells, and of a capsule formed of epithelioid cells.*

   ➲ *Herring bodies are the neurosecretory cells present in posterior pituitary and represent the terminal axonal endings coming from hypothalamus*

   ➲ *Corpora Amylacea are small hyaline granules present in prostrate, CNS(in foot process of Astrocytes) and lungs*

   ➲ *Corpora arenaceum are calcified structures present in Pineal body and Choroid Plexus*

   *(**Source**: Wheater's Functional Histology 6th Edition)*

4. **Carpal tunnel syndrome is NOT characterized by:**
   a. Paralysis of opponens pollicis
   b. Paralysis of abductor pollicis brevis
   c. Paralysis of superficial head of flexor pollicis brevis
   d. Paralysis of adductor pollicis

   ➲ *Carpal Tunnel Syndrome is characterized by injury to Median Nerve so affects the muscles of hand supplied by median nerve*

Nerve Supply of Median Nerve	*Thenar Muscles(Abductor pollicis brevis, Opponens pollicis and Superficial head of flexor pollicis brevis), 1st and 2nd lumbricals*
Nerve Supply of Ulnar Nerve	*Thenar muscle(Adductor pollicis and deep head of flexor pollicis brevis), Hypothenar muscle(Abductor, Flexor, Opponens digiti minimi), 3rd and 4th Lumbricals, Dorsal and Palmar Interossei*

***Source**: Moore's Clinically Oriented Anatomy 7th Edition Page no 785*

Answers

1.a	2nd week of ...	2.c	Radial Nerve	3.b	Herring Bodies
4.d	Paralysis of adductor pollicis				

Physiology

5. **50ml of oxygenated blood contains 10ml of oxygen. What is the volume of oxygen dissolved in plasma?**
   a. 3ml b. 1.3ml
   c. 0.3ml d. 0.7ml

   ➲ *Oxygen is transported to tissues in two forms: Bound to Hemoglobin(97%) and Dissolved state(3%)*

   ➲ *So 3% of total 10ml= 0.3ml*

   *(**Source**: Guyton and Hall Textbook of Medical Physiology 12th Edition Page no 500)*

6. **A football player before starting a match performs some warm up exercise including stretching of muscles of shoulder and legs. He is actually inducing:**
   a. Clonus b. Tetany
   c. Treppe d. Twitch

   ➲ *Treppe or Staircase Effect is the phenomenon by which sports player increase muscle tone and strength after a brief period of rest which later on prevent painful muscle spasm during brisk sports.*

   ➲ *Clonus is a series of involuntary, rhythmic, muscular contractions and relaxations. Clonus is a sign of certain neurological conditions, particularly associated with upper motor neuron lesions involving descending motor pathways.*

   ➲ *Tetany or tetanic seizure is a medical sign consisting of the involuntary contraction of muscles, which may be caused by disorders that increase the action potential frequency of muscle cells or the nerves that innervate them.*

➲ *Muscle twitch, is a small, local, involuntary muscle contraction and relaxation which may be visible under the skin.*

***(Source:** Guyton and Hall Textbook of Medical Physiology 12th Edition Page no 80)*

7. Renin is secreted from:

a. Cells of Macula densa b. Cells of PCT

c. Cells of DCT d. Juxtaglomerular cells

➲ *Renin is secreted from the Juxtaglomerular cells of afferent and efferent arterioles of the JG apparatus in response to decreased renal blood flow and decreased NaCl delivery to Macula Densa (Tubuloglomerular feedback) to activate the Renin-Angiotensin Aldosterone System.*

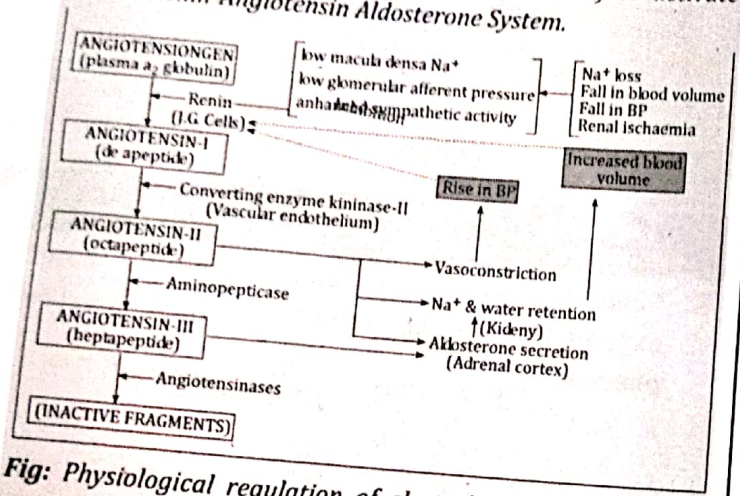


***Fig:** Physiological regulation of electrolyte balance, plasma volume and blood pressure by the renin-angiotensin system*

***Source:** KD Tripathi Essential of medical pharmacology, 6th edition, page number 480*

8. ABO incompatibility testing is NOT required in which of the blood products?

a. Fresh Frozen plasma b. Packed cell Volume

c. Platelet concentrate d. Cryoprecipitate

Blood Products	Description
Packed Red Blood Cells(PRBC)	➲ They are spun down in the centrifuge and contain concentrated packs of RBCs. ➲ Each unit is approx.. 330ml and stored in SAG-M solution (Saline-adenine-Glucose-Mannitol) ➲ Shelf life of 5-6weeks at 2-6^{0}C ➲ Requires ABO incompatibility test
Fresh Frozen Plasma (FFP)	➲ Rich in coagulation factors and removed from fresh blood ➲ Stored at -40 to -50^{0}C with Shelf life of 2 years ➲ Requires ABO incompatibility test
Platelets Concentrate	➲ Supplied as pool platelet concentrate and contain about 250 x 10^9/L ➲ Are stored in special agitator at 20-24^0 and has shelf life of just 5 days. ➲ Requires ABO incompatibility test
Cryoprecipitate	➲ Supernatant precipitate of FFP and is rich in factor VIII ➲ Stored at -30^{0}C with 2 years of shelf life ➲ ABO incompatibility test NOT required

9. Corneal Reflex is stimulated by:

a. Optic nerve

b. Occulomotor nerve

c. Orbital branch from pterygopalatine ganglion

d. Facial nerve

Corneal Reflex pathway

Stimulus
↓
Ophthalmic Division of Trigeminal Nerve
↓
Spinal Nucleus(CN V)
↓
Interneurons
↓
Facial Motor Nucleus
↓
Temporal branch (CN VII)
↓
Orbicularis Oculi

10. Maximum Torniquet time for upper limb is:

a. 1/2 hour b. 1 hour

c. 1.5 hours d. 2 hours

➲ *Maximum tourniquet time for upper limb: 1.5 hrs*

➲ *Maximum tourniquet time for lower limb: 2 hrs*

Answers

5.c	0.3ml	6.c	Treppe	7.d	Juxtaglomeru...
8.d	Cryoprecipitate	9.d	Facial nerve	10.c	1.5 hours

Biochemistry

11. Most common type of post translational modification of histone proteins is:

a. Phosphorylation b. Methylation

c. Acetylation d. Ubiquitylation

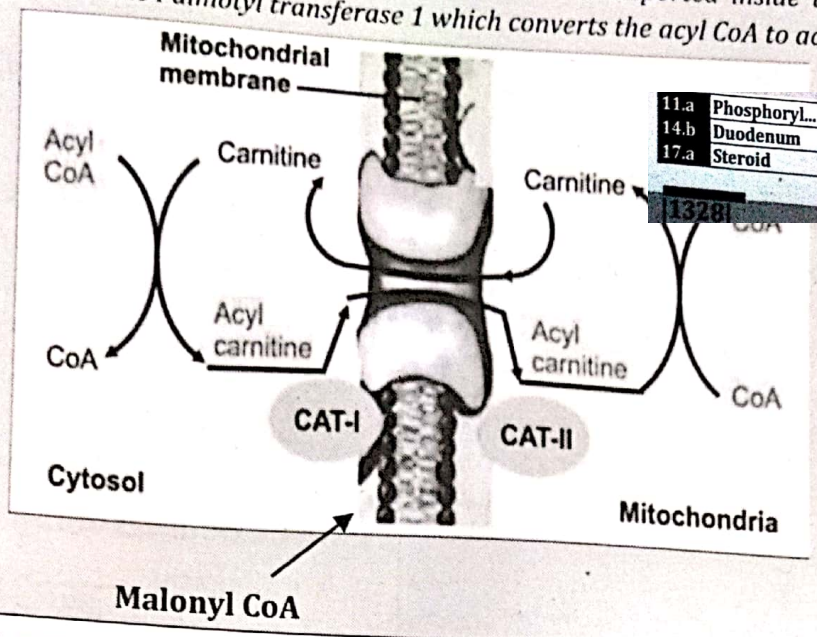
➲ *Post-translational modification (PTM) refers to the covalent and generally enzymatic modification of proteins following protein biosynthesis. Proteins are synthesized by ribosomes translating mRNA into polypeptide chains, which may then undergo PTM to form the mature protein product.*

- *PTMs are important components in cell signaling, as for example when prohormones are converted to hormones.*
- *Phosphorylation is the commonest PTM*

12 Inhibitor of Carnitine Shuttle is

a. Malonyl CoA
b. Succinyl CoA
c. Citrate
d. Oxaloacetate

- *Carnitine Shuttle is the mechanism by which long chain fatty acids are transported inside the mitochondria for oxidation Malonyl CoA is the inhibitor of Carnitine Palmotyl transferase 1 which converts the acyl CoA to acylcarnitines.*



Answers

11.a	Phosphoryl...	12.a	Malonyl CoA	13.d	Very long ...
14.b	Duodenum	15.b	Inhibits the a...	16.a	Lysosome
17.a	Steroid				

13 Zellweger's syndrome is a peroxisomal oxidation disorder characterized by defect in metabolism of which type of fatty acid?

a. Unsaturated Fatty acid
b. Short chain Fatty acid
c. Medium chain Fatty acid
d. Very long chain fatty acid

- *Zellweger's syndrome is autosomal recessive disorder and belongs to **Zellweger Spectrum of peroxisome biogenesis disorders** and caused by mutation in PEX genes that encode peroxins proteins required for norma assembly of peroxisomes.*
- *The other two includes Neonatal Adrenoleukodystroph (NALD) and Infantile Refsum's disease.*
- *Peroxisome is the site of metabolism of very long chai fatty acids and branched chain fatty acids.*
- *Abnormal Accumulation of fatty acids is characterized b craniofacial abnormalities, hepatomega chondrodysplasias, eye abnormalities and renal cysts.*
- *Hypotonia, seizures, hepatomegaly, early death*

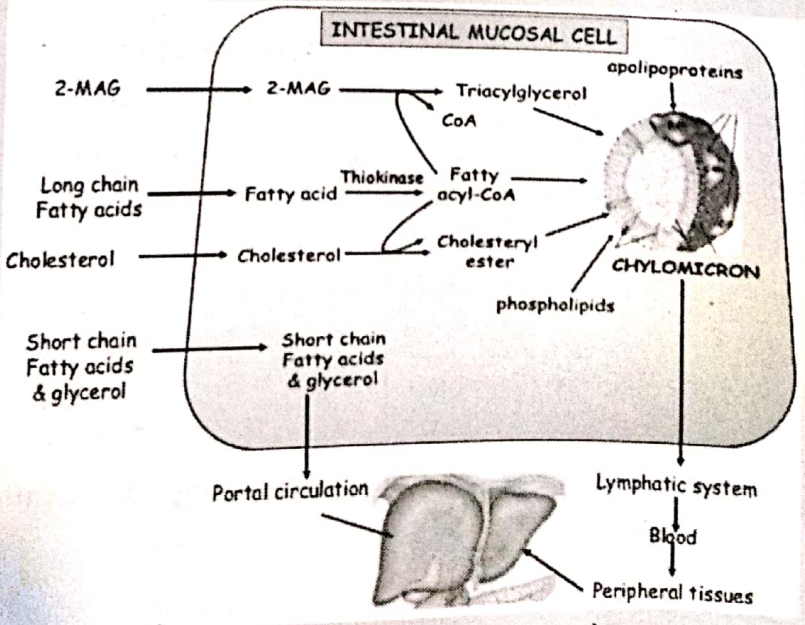
***Source:** First Aid Step 1 USMLE 2019, page number 47*

4.Short chain fatty acids are mostly absorbed in;

a. Stomach
b. Duodenum
c. Ileum
d. Colon

- *Short chain fatty acids are absorbed unchanged and most absorption occurs in duodenum. Absorption of Iron and Vitamin C als occurs in duodenum.*

Short fat CID



...students, DM Vasudevan 6th edition)

15. **In a patient suffering from Tetanus, the toxin mainly affects the nerve endings in CNS and anterior horn cells of spinal cord. What is the MOA of above toxin:**

a. Inhibits the release of Acetylcholine
b. Inhibits the action of inhibitory neurotransmitters GABA and Glycine
c. Cleave SNARE protein
d. Facilitates the action of Acetylcholinesterase

- *Clostridium tetani mainly produces two exotoxins: Tetanospasmin and tetanolysin.*
- *Tetanospasmin mainly acts in the nerve endings of CNS and anterior horn cells of spinal cord by inhibiting the release of inhibitory neurotransmitter like Glycine and GABA.*
- *Thus there is unregulated stimulation of post synaptic nerves resulting in painful spastic contraction of skeletal muscles resulting in Risus sardonicus, Trismus, Opisthotonus, Emprosthotonus and Pleurothotonus.*

Source: *SRB's manual of surgery 4th edition, pg 50*

16. **Which of the subcellular cell organelle is rich in Acid phosphatase;**

a. Lysosome
b. Endoplasmic reticulum
c. Ribosome
d. Golgi apparatus

- *Acid phosphatases are stored in lysosomes and functions when they fuse with endosomes.*
- *There are various forms of Acid Phosphatase and their serum levels are specifically used to evaluate the prognosis after Prostrate cancer surgery*

Source: *Guyton and Hall textbook of Physiology, 11th edition, page number 16*

17. **Progesterone belongs to following group of hormones:**

a. Steroid
b. Peptide
c. Amines
d. Protein

Types	*Examples*
Steroid Hormones	*Cortisol, Aldosterone, Estradiol, Progesterone, Testosterone, Active VitD3*
Amino Acid Derivatives	*Thyroxine, Tri-iodothyronine, Adrenaline, Nor-adrenaline, Melatonin*
Polypeptides	*Oxytocin, Vasopressin, Insulin, Calcitonin, Parathormone, Prolactin, GH,*

Source: *DM Vasudevan Textbook of Biochemistry 6th edition pg 532*

18. **Therapeutic drug monitoring is required in which group of drugs:**

a. Antihypertensive
b. Antidiabetic
c. Anticoagulants
d. Antiepileptics

- *Therapeutic Drug Monitoring is required for those group of drugs which have very narrow range of safe dose(Therapeutic Window)*
- *Examples: Aminoglycosides*
- *Antiepileptics (Phenytoin, Carbamazepine, Valproate)*
- *Mood stabilizers like Lithium*
- *Antipsychotics (Clozapine, Pimozide)*
- *Biological monoclonal antibody drugs (Infliximab, Adalimubab)*

Reference: *Medscape, UptoDate*

19. **Ototoxic drugs are all except:**

a. Amikacin
b. Erythromycin
c. Cisplatin
d. Ciprofloxacin

Ototoxic Drugs

Aminoglycosides: *Amikacin, Streptomycin, Tobramycin*

Loop Diuretics: *Furosemide and Ethacrynic Acid*

Chemotherapeutic agents: *Cisplatin, Carboplatin, Vincristine*

NSAIDS: *Aspirin*

Macrolides: *Erythromycin*

Others: *Quinine, Chlorhexidine, Heavy metals (mercury and lead)*

Source: *Shrivastav's illustrated textbook ENT and Head and neck surgery, 2nd edition, pg 77*

20. **A patient had complains of fever and cough for 1 month. Chest X-ray show cavitations at apical lobe and sputum AFB is also positive. He is also HIV positive and is on lamivudine, zidovudine, lopinavir and cotrimoxazole. Which of the following drug cannot be used for the treatment of TB in this patient?**

a. Rifampicin
b. Isoniazid
c. Pyrazinamide
d. Ethambutol

- *The combined use of NNRTI(Efavirenz and Nevirapine) and Protease inhibitors(Lopinavir, Ritonavir, Indinavir) along with Rifampicin is contraindicated as Rifampicin induces hepatic cytochrome P-450 and increases their metabolism markedly decreasing their blood levels. Modified rifampicin known as rifabutin is used.*

21. **Dry Cough is common side effect of:**

a. Amlodipine
b. Verapamil
c. Enalapril
d. Losartan

- *Cough is the commonest side effect of all ACE inhibitors*

Answers

11.a	Phosphoryl...	12.a	Malonyl CoA	13.d	Very long ...
14.b	Duodenum	15.b	Inhibits the a...	16.a	Lysosome
17.a	Steroid				

13.d 19.d 20.a

- It occurs due to inhibition of metabolism of bradykinin
- Side effects of ACE Inhibitors: Cough, Angioedema, Dysgeusia, Hyperkalemia, fetopathic effects, granulocytopenia, ARF

Source: KD Tripathy essential of pharmacology,6th edition, pg number 48

Answers					
18.d 21.c	Antiepileptics Enalapril	19.d	Ciprofloxacin	20.a	Rifampicin

Microbiology

22.Which of the following is DNA virus

a. HAV
b. HBV
c. HCV
d. HEV

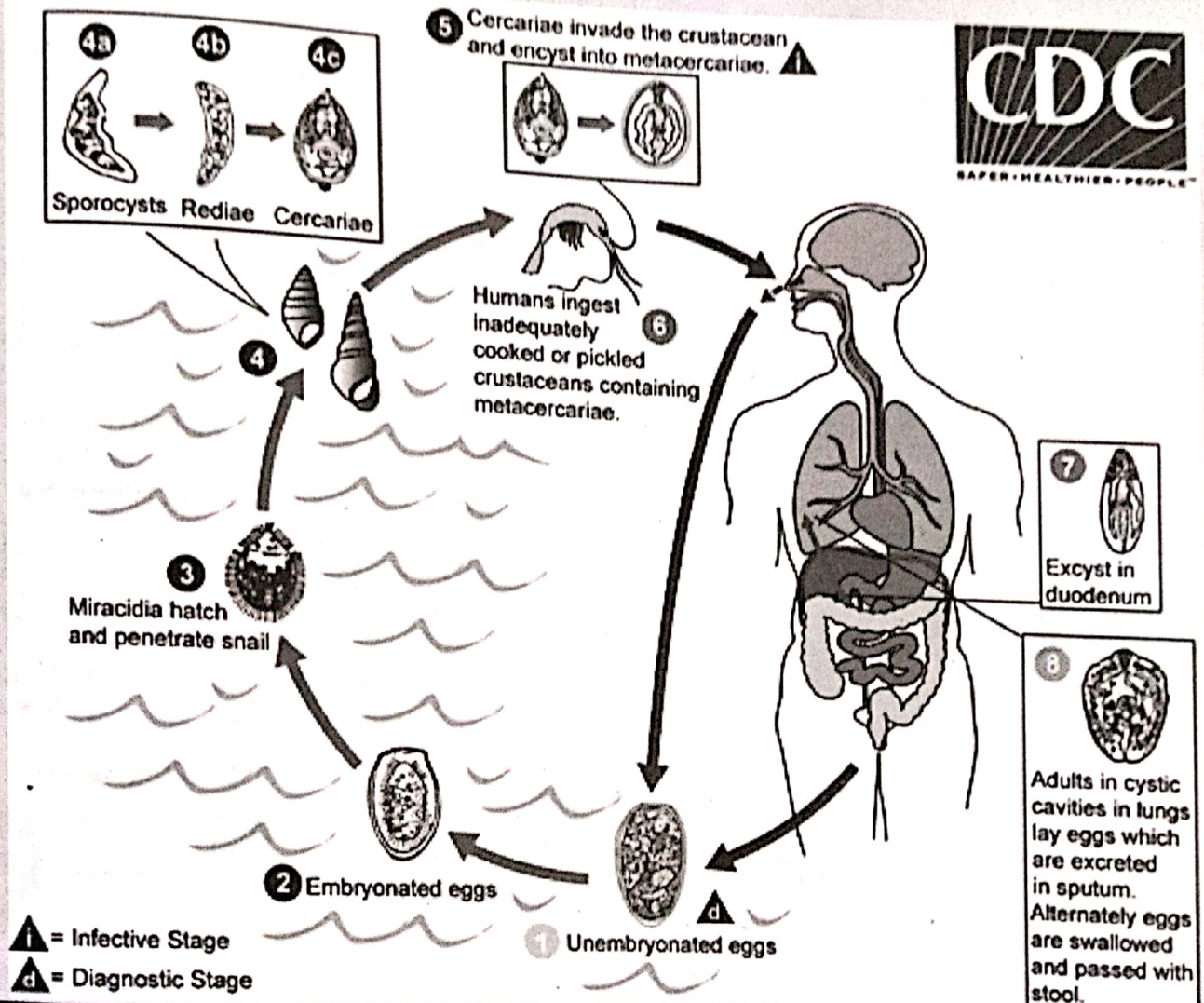
DNA viruses are HHAPPPy

H: Hepadnavirus(HBV)
H: Herpes Virus
A: Adenovirus
P: Pox Virus
P: Parvo Virus
P: Papilloma Virus(HPV)

23.Which of the following parasites cause Hemoptysis?

a. Schistosoma hematobium
b. Paragonimus westermani
c. Schistosoma japonicum
d. Hymenolepis nana

Paragonimus Westermani(Lung Fluke)



Answers			
22.b	HBV	23.b	Paragonimus westermani

Pathology

24.Serum IgE is increased in

a. Intrinsic bronchial asthma
b. Extrinsic bronchial asthma
c. COPD
d. Bronchiolitis

- *Intrinsic asthma is also called as non-atopic asthma. The are present in minority of patients with negative skin te to common inhalant allergens and normal seru concentration of IgE. They show later onset of disease a commonly have concomitant nasal polyps.*
- *Sampster's triad: Nasal polyp, Bronchial Asthma, Aspir hypersensitivity*

***Source**: Robbins and cotrans pathologic basis of disease, 9 edition pg 679*

25. **Mallory bodies is seen in:**

a. Alcoholic hepatitis
b. Viral hepatitis
c. Cirrhosis
d. Rheumatic fever

Mallory bodies are the eosinophilic cytoplasmic inclusion bodies in hepatocytes. These are chracterstic but not specific of alcoholic liver disease. These are also present in Wilsons disease, primary biliary cirrhosis, non alcoholic cirrhosis, hepatocellular carcinoma and morbid obesity.

Other morphologic feature of Alcoholic hepatitis:

- *Hepatocyte swelling and necrosis*
- *Neutrophilic reaction*
- *Alcoholic steatofibrosis: small clusterof hepatocyte in chicken wire fence pattern*
- *Laennec cirrhosis*

***Source:** Robbins and Cotran pathologic Baisis of Disease, 9th edition, pg 843*

26. **Gleason grading is done for**

a. Ca prostate
b. Ca pancreas
c. Gastric ca
d. Ca intestine

***Source:** Robbins and Cotran Pathologic Basis of Disease, 9th edition pg 987*

27. **Transmural inflammation is seen in:**

a. Pseudomembranous colitis
b. Crohns disease
c. Ulcerative colitis
d. Enteric fever

***Source:** Robbins and Cotran pathologic basis of Disease, 9th edition, pg 599*

28. **In classical pathway, c5 convertase is:**

a. C14a
b. C14b3a
c. C14b3a2b
d. C567

- *Complement proteins are present in inactive forms in plasma and many are activated to become proteolytic enzymes that degrade other complement proteins, thus forming an enzymatic cascade capable of tremendous amplification. The critical step in complement activation is the proteolysis of third (most abundant) component, C3. Cleavage of C3 occurs by one of the three pathways: classical pathway, which is triggered by the fixation of C1 to antibody (IgM or IgG) that has combined with antigen; alternative pathway, which can be triggered by microbial surface molecules, complex polysachharides in the absence of antibody; lectin pathway, in which plasma mannose binding lectin binds to carbohydrates on microbes and directly activates C1. Whichever pathway is involved in early steps, they all lead to the formation of C3 convertase. C3 convertase splits C3 into C3a and C3b. C3a is released and C3b becomes covalently attached to the cell or molecule where complement is being activated. More C3b binds to the previously generated fragments to form C5 convertase, which cleaves C5 to C5a and C5b.*

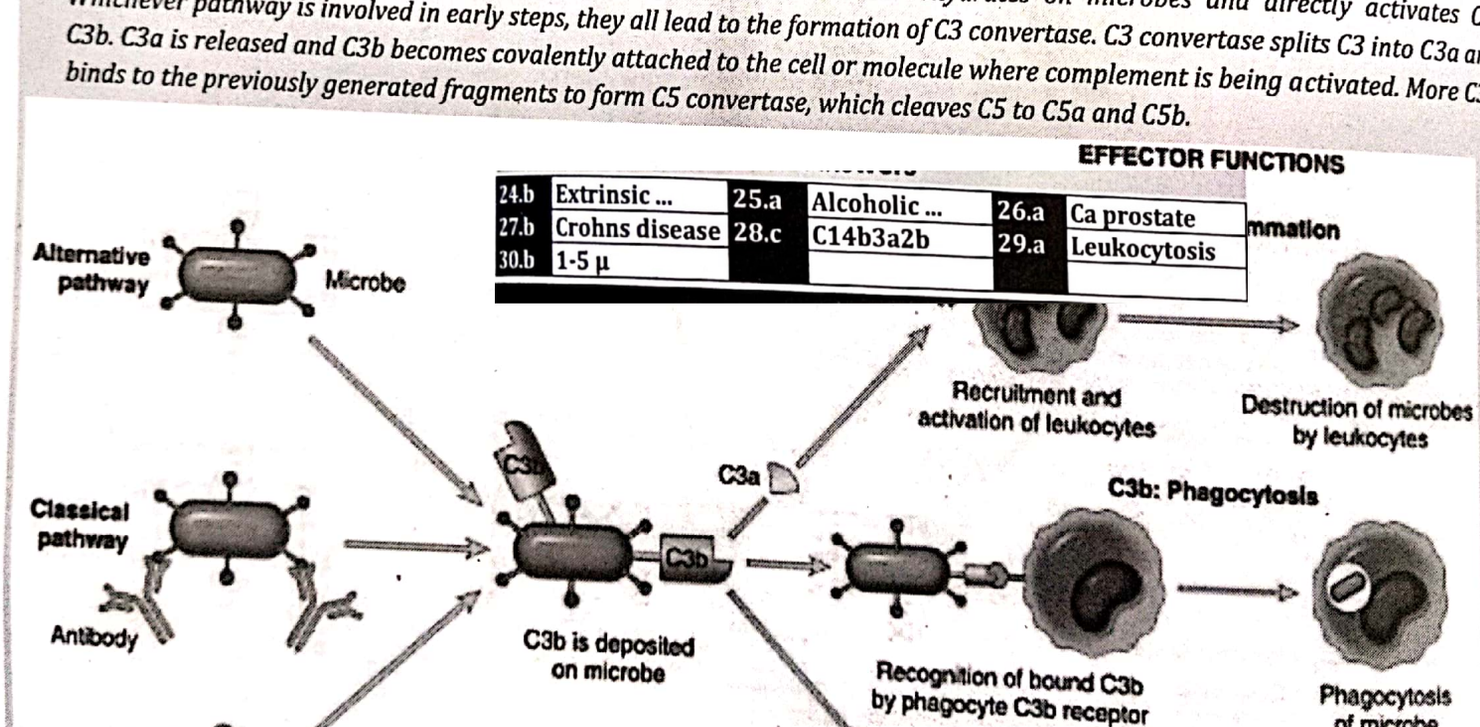


***Fig:** The activation and functions of the complement system. Activation of complement by different pathways leads to cleavage of C3. The functions of the complement system are mediated by breakdown products of C3 and other complement proteins, and by the membrane attack complex (MAC).*

***Source:** Robbins and Cotran Pathologic basis of Disease, 9th edition*

29. **Ebb's phase of tissue injury is characterized by:**

a. Leukocytosis
b. Increased vascular permeability
c. Increased capillary leakage
d. Decreased Basal Metabolic rate

➲ *Ebb and flow phases of posttraumatic metabolic alterations have been described. Ebb phase is characterized by leukocytic and bacterial infiltration of previously damaged tissues, which occurs in an edematous, oxygen poor environment. The ebb phase is associated with decline in body temperature and oxygen consumption, presumably aimed at reducing posttraumatic energy depletion. In contrast the flow phase occurs after resuscitation from a state of shock, which leads to an increased metabolic turnover, activation of the innate immune system and induction of hepatic acute phase response. This hypercatabolic condition leads to significantly increased oxygen consumption and energy expenditure.*

30. **What particle size is most dangerous for causing Pneumoconiosis?**

a. <1 µ
b. 1-5 µ
c. 5-10 µ
d. None

➲ *The most dangerous particles range from 1-5 µ in diameter because they may reach the terminal airways and air sacs and settle in their linings.*

Source: Robbins and Cotran pathologic basis of disease, 9th edition pg 688

Answers

24.b	Extrinsic ...	25.a	Alcoholic ...	26.a	Ca prostate
27.b	Crohns disease	28.c	C14b3a2b	29.a	Leukocytosis
30.b	1-5 µ				

Forensic Medicine

31. **Primary blast injuries are all except:**

a. Perforation of stomach, colon, intestine
b. Penetrating thoracic trauma
c. Acoustic barotraumas
d. Blast Lung

➲ *Primary blast injury results from dramatic change in barometric pressure which spreads concentrically from the site of explosion at the speed of sound. A wave of very high pressure (shock wave) is followed by a weak wave of negative pressure, a suction which lasts about 5 times as long. Blast causes maximum damage at an interface between tissues in contact with atmosphere, that's why lung suffers most (in air blast). Other hollow organs like middle ear, GIT (cecum and colon>ileum, jejunum and*

Answers

31.b	Penetrating ...	32.b	Insurance to ...	33.b	EDTA
34.a	Due to rupt...	35.b	3 days	36.b	Patient is ...

➲ *Blast lung: Injury of air blast to the lung-subpleural patchy hemorrhages (in line of ribs), rupture of alveolar septa, intrapulmonary hemorrhages, bullae at margins, reactive pulmonary edema, blood stained froth and bronchopneumonia later.*

32. **Medical Indemnity insurance is:**

a. Insurance to be paid for act of medical negligence
b. Insurance to be paid to hospital for hooliganism
c. Insurance to be paid during RTA
d. Insurance to be paid for victims of natural disaster

Other terms:

➲ *Inquest: Investigation or inquiry into the cause of death, where death has occurred in a suspicious circumstances or death is unnatural*

➲ *Subpoena: document compelling the attendance of witness in a court of law under penalty, on a particular day, time and place, for the purpose of giving evidence.*

➲ *Conduct money: fee offered to a witness in civil cases, at the time of serving summons to meet the expenses for attending the civil court*

➲ *Res Ipsa Loquitor: the patient need not to prove negligence in case where the rule of res ipsa loquitor applies, which means fact speak for itself.*

➲ *Novus actus interveniens: A person is responsible not only for his actions, but also for the logical consequences of those actions.*

➲ *Vicarious liability: An employer is responsible not only for his own negligence but also for the negligence of his employees by the principle of respondent superior.*

33. **For DNA test, liquid blood is stored in:**

a. NaF
b. EDTA
c. K oxalate
d. Na citrate

➲ *DNA profiling is based upon the analysis of STR (Short Tandem Repeats) region that consists of repeated sequences of four base pairs.*

➲ *Specimen: Any nucleated cells as blood and blood stains having leucocytes, semen stains, saliva, urine, tissues and organs, bones, hair, nails or teeth. Buccal swab is the most desirable specimen as there is less chance of contamination.*

34. **True about EDH is:**

a. Due to rupture of middle meningeal artery
b. Below duramater
c. Below Arachnoid
d. Due to rupture of bridging veins

Extradural Hematoma:

➲ *Collection of blood in the extradural space between dura and skull, MC siteis temporoparietal region.*

➲ *Vessels commonly involved: middle meningeal veins, anterior branch of middle meningeal artery, posterior branch of middle meningealartery*

- *Kernohan's notch effect: coning of supratentorial content through tentorial hiatus resulting in shift of midbrain towards opposite side s/t corticospinal tract before decussation on opposite side gets injured and hemiparesis and papillary changes on same side of hematoma.*
- *Lucid interval present*
- *CT scan head (diagnostic) and shows* ***biconvex*** *lesion.*

Source: *SRB's manual of surgery, 4th edition pg 1177*

35. According to new provision, medicolegal report should be submitted to the court of law within:

a. 24 hrs
b. 3 days
c. 5 days
d. 7 days

- ***अनुसन्धान प्रतिवेदन पठाउनु पर्ने:*** *(१) अनुसूची-१ वा अनुसूची - २ अन्तर्गतको कुनै कसूरको सम्बन्धमा अनुसन्धान पूरा भएपछि अनुसन्धान अधिकारीले कसूर गरेको सबै वा कुनै व्यक्ति उपर मुद्दा चलाउन पर्याप्त प्रमाण पुगने देखिएमा निजलाई कुन कानून अन्तर्गत सजाय हुनु पर्ने हो सो कुरा खुलाई तथा कसूर भएको भए पनि त्यस्तो कसूर गर्ने व्यक्ति यही हो भन्ने यकिन हुन नसकेको वा कुनै व्यक्ति उपर मुद्दा चलाउन पर्याप्त प्रमाण नपुगने देखिएकोमा सोही व्यहोरा खुलाई मिसिल कागजको सक्कल तथा नक्कल प्रति र दस्ती प्रमाण सहितको अनुसन्धान प्रतिवेदन अनुसूची - १९ बमोजिमको ढाँचामा तयार गरी सम्बन्धित सरकारी वकिल कार्यालयमा पठाउनु पर्नेछ।*
- *(२) उपदफा (१) बमोजिम प्रतिवेदन पठाउँदा थुनुवा नभएको मुद्दा भए सम्बन्धित कानूनको हदम्याद पुग्ने कम्तीमा पन्ध्र दिन अगावै र थुनुवा भएको मुद्दा भए मुद्दा चलाउने वा नचलाउने निर्णय गर्ने र अभियोगपत्र तयार गरी अदालतमा दायर गर्न लाग्ने समयलाई समेत ध्यानमा राखी मुद्दा दायर गर्ने दिनभन्दा सामान्यतया कम्तीमा तीन दिन अगाडि नै पठाउनु पर्नेछ।*

Source: *Muluki Ain, Faujdaari aacharsamhita 2074*

36. Suspended animation is:

a. Hibernation
b. Patient is alive but there are no apparent signs of life
c. Hypnosis
d. Hypothermia

- *Suspended animation or apparent death is a condition in which signs of life are not found as the functions are interrupted for some time, or are reduced to minimum. However life continues and resuscitation is successful.*
- *May be found in electrocution, drowning cholera, after anesthesia, shock, sunstroke, cerebral concussion, narcotic poisoning, newborn infants, voluntary in yoga.*

Answers

31.b	Penetrating ...	32.b	Insurance to ...	33.b	EDTA
34.a	Due to rupt...	35.b	3 days	36.b	Patient is ...

Dermatology

37. Which of the following is the characteristic of psoriasis?

a. Nikolsky sign
b. Auspitz sign
c. Bullae spread sign
d. String Sign

- ***Typical lesion in psoriasis****: well defined erythematous (salmon red) plaques with characteristic silvery white scales accentuated by grating lesions.*
- ***Nail involvement in psoriasis****: 50% (oil drop sign seen)*
- ***Joint involvement in psoriasis****: 10%*
- ***Auspitz sign positive:*** *3 steps*
  - ***Step 1:*** *gently scrape the lesion with glass slide: accentuates silvery scales (grattage sign positive)*
  - ***Step 2:*** *as you scrape the lesion, glistening white adherent membrane is seen (Berkley's membrane)*
  - ***Step 3:*** *on removing the membrane, punctuate bleeding points are seen (Auspitz sign positive)*
- ***Koebners phenomenon (isomorphic phenomenon)****: new lesions of the original disease develop at the site of trauma (scratches, surgical incision and injury): seen in psoriasis, lichen planus and vitiligo.*
- ***Pseudo-Koebners phenomenon****: due to auto-inoculation. Seen in molluscum contagiosum,plane wart and eczema.*
- ***Nikolsky sign****: application of tangential pressure on normal skin (usually a pretibial area) results in formation of new bulla*
- ***Bulla spread sign****: tangential pressure if applied to pre-existing bulla results in the spread of bulla*
- ***Nikolsky and bulla spred signs are used to elicit acantholysis****. Hence they are positive in Pemphigus but negative in Bullous Pemphigoid.*

38. Scabies in infants is different from adults due to involvement of

a. Genitals
b. Face
c. Teeth
d. Umbilicus

- ***Typical lesion in scabies****: burrows (thin thread-like grayish serpentine lesions). Papulovesicles and papules are seen due to hypersensitivity to the mite Sarcoptes scabiei*
- ***Site****: finger webs, wrist, ulnar aspects of forearm, breasts, periumbilical, scrotum and penis. Face, palms and sole spared in adults but characteristically involved in children.*

39. Skin pigmentation in leprosy patients is due to intake of

a. Clofazimine
b. Dapsone
c. Rifampicin
d. Steroids

Side effects of anti- leprosy drugs:

- ***a. Dapsone:*** *hemolytic anemia,dapsone hypersensitivity, TEN, hepatitis*
- ***b. Rifampicin:*** *hepatitis, drug eruptions,* ***red secretions****, flu like symptoms,*
- ***c. Clofazimine:*** *ichthyosis, skin pigmentation, GI side effects*

Reference: *Illustrated Synopsis Of Dermatology and Sexually Transmitted Diseases, Neena Khanna 4th Edition*

Answers

37.b	Auspitz sign	38.b	Face	39.a	Clofazimine

Ophthalmology

40. Commonest cause of blindness globally is

a. Ocular trauma
b. Age related cataract
c. Diabetic retinopathy
d. Angle closure glaucoma

- *Most common cause of preventable blindness: Trachoma*
- *Most common cause of blindness in developed countries: Age related macular degeneration*
- *Second most common cause of blindness globally: Glaucoma*
- *Categories of visual impairment (WHO, 1977)*[4]

Category of visual impairment		Level of visual acuity (Snellen)
Normal vision	0	6/6 to 6/18
Low vision	1	Less than 6/18 to 6/60
	2	Less than 6/60 to 3/60
Blindness	3	Less than 3/60 (FC at 3m) to 1/60 (FC at 1m) or visual field bet3ween 5° and 10°
	4	Less than 1/60 (FC at 1m) to light perception or visual field less than 5°
	5	No light perception

***Source:** Comprehensive Ophthalomology AK Khurana, 6th edition pg 475*

41. Which of the following eye defects cause angle closure glaucoma?

a. High myopia
b. High myopic astigmatism
c. Hypermetropia
d. Keratoconus

- *Hypermetropic eye with shallow anterior chamber: PACG*
- *Myopes are more predisposed to have primary open angle glaucoma (POAG)*
- *Astigmatism: type of refractive error wherein refraction varies in different meridian*

***Source:** Comprehensive Ophthalomology AK Khurana, 6th edition pg 240*

42. Most common causative organism causing fungal keratitis in chronic alcoholic and diabetic patient is

a. Fusarium
b. Candida
c. Aspergillus
d. Histoplasma

- *There is no actual data reported to this question in any textbook or research.*

43. Ophthalmic change seen in papilledema is

a. Central scotoma
b. Enlarged blind spot
c. Paracentral scotoma
d. Arcuate scotoma

- ***Papilledema:** passive disc swelling d/t increased ICP, almost always bilateral although it may be asymmetrical.*
- ***Disc edema:** includes both active and passive swelling of optic disc.*
- ***Enlarged blind spot and constriction of visual field** is seen in established and chronic papilledema. It is normal in early papilledema.*

***Source:** Comprehensive Ophthalomology AK Khurana, 6th edition pg 324*

44. Which one of the following is the commonest malignancy in children <5 years?

a. Retinoblastoma
b. Acute lymphoblastic leukemia
c. Rhabdomyosarcoma
d. Wilm's Tumor

- *Most common intra ocular malignant tumor in children: Retinoblastoma*
- *Most common primary intra-orbital malignant tumor in children: Rhabdomyosarcoma*
- *Most common intraocular malignant tumor in adult: Metastasis*
- *Most common primary intraocular malignant tumor in adult: Uveal melanoma*
- *Most common source of orbital metastasis in children: Retinoblastoma*
- *Most common source of orbital metastasis in adult: Breast*
- *CML is mostly seen in adults.*

(ALL could be possible answer but it may be seen up to 12 years and retinoblastoma generally occurs in children 1-2 years. Also the question was asked sandwiched between other ophthalmology questions, so the most correct answer is Retinoblastoma.)

45. A patient is suffering from congenital Horner syndrome. Which one of the following eye changes do you expect in him?

a. Iris heterochromia
b. Miotic pupil
c. Leukochoria
d. Mydriasis

- ***Horner Syndrome:** loss of sympathetic innervations to the eye.*
- ***Triad of Horner Syndrome:***
- ***Miosis, anhydrosis and ptosis @MAP (small eye, dry and can't see the sky)***

***Source:** Medscape*

Answers

40.b	Age related ...	41.c	Hypermetropia	42.a	Fusarium
43.b	Enlarged ...	44.a	Retinoblastoma	45.b	Miotic pupil

ENT

46. Most common site of thyroglossal cyst is

a. Suprahyoid
b. Infrahyoid
c. At the level of thyroid cartilage
d. At the level of cricoid cartilage

Thyroglossal duct cyst:

- *Congenital cyst of the thyroglossal duct, commonest midline swelling in children*
- *Can be located anywhere most commonly below the hyoid bone.*
- *Asymptomatic generally*
- *If infected, painful and may form fistula*
- *Sistrunk operation: excision of cyst or fistula along with the duct. Surgical excision must include central portion of the body of hyoid, base of the tongue.*

***Source:** Shrivastav Illustrated textbook of ENT and Head and Neck surgery, 2nd edition, pg 77*

47. A person is suffering from Obstructive Sleep Apnea Syndrome (OSAS). Which one of thefollowing is the best non- surgical treatment modality for him?

a. Intermittent positive airway pressure
b. Continuous positive airway pressure
c. Submandibular advancement device
d. Le fort I osteotomy

- *CPAP is the gold standard treatment for OSAS.*
- *Nasal cPAP is considered highly effective in controlling symptoms. Other positive airway pressure modalities are also available to patients that don't tolerate cPAP.*
- *Mandibular advancement devices are effective in mild to moderate OSA and provide a viable alternative for patients intolerant to cPAP.*
- *Role of surgery is controversial. Uvulopalato-pharyngoplasty is well established where CPAP has failed.*

***Source:** NCBI, Pubmed*

48. A 55 years old diabetic female comes to your OPD with swelling under the chin and drooling of saliva since a week. On examination, she feels difficulty on opening the mouth and the floor of mouth was raised. She also gives history of tooth extraction 10 days back. What is the most probable diagnosis?

a. Faucial diphtheria
b. Peritonsillar abscess
c. Ludwigs angina
d. Vincent angina

- *Ludwig's Angina is the infection of submandibular space.*
- *Most common source of infection is dental infection. (h/o dental extraction 10 days back in this case)*

Presentation:

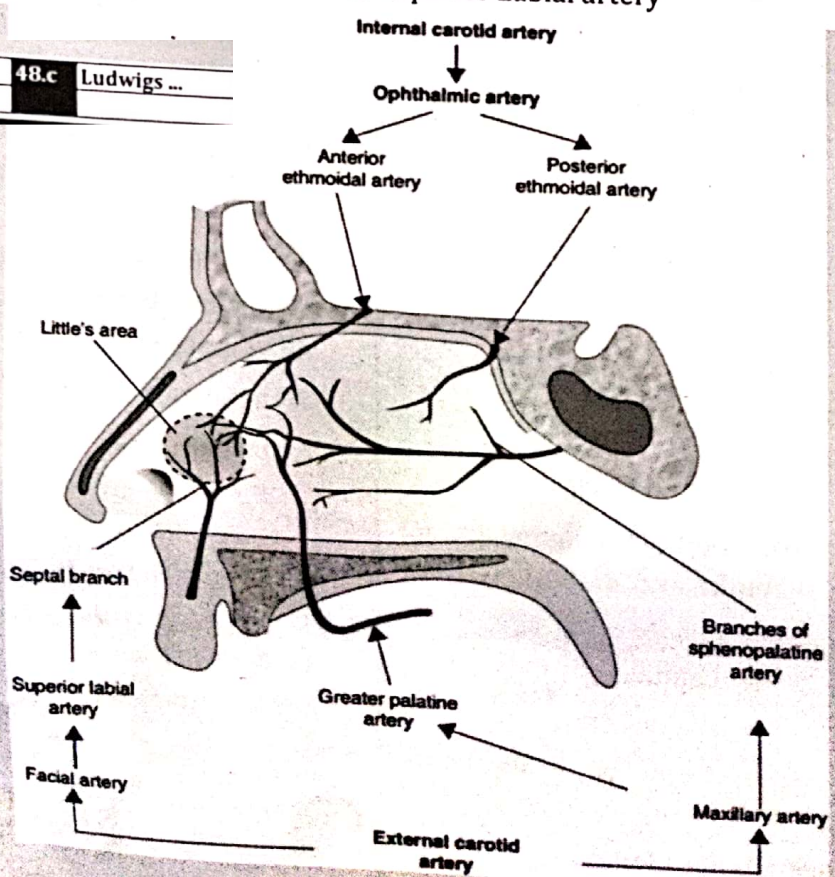
- *Difficulty in swallowing (odynophagia)*
- *Trismus (difficulty in opening the mouth)*
- *Floor of the mouth is raised in examination.*

***Source:** Shrivastav Illustrated textbook of ENT and Head and Neck surgery, 2nd edition, pg196*

49. Little's area is not supplied by:

a. Anterior ethmoidal artery
b. Posterior ethmoidal artery
c. Septal branches of facial artery
d. Superior Labial artery

46.b	Infrahyoid	47.b	Continuous ...	48.c	Ludwigs ...
49.b	Posterior et...	50.c	Speckled e...		



50. **Pre malignant lesion most likely to go malignant transformation is**

a. Lichen Planus
b. Sub mucosal fibrosis
c. Speckled erythroplakia
d. Syphilitic Stomatitis

- ***Premalignant Lesion:*** *Morphologically altered tissue in which cancer is more likely to occur than its apparently normal counterpart. Eg: leukoplakia, erythroplakia, bowens disease*
- ***Premalignant Condition:*** *Generalized state of the body, which is associated with significantly increased risk of cancer. Eg: oral submucous fibrosis, oral lichen planus, syphilitic glossitis, dyskeratosis congenital*

(In above question, premalignant lesion is asked. Hence the answer is speckled erythroplakia which has highest risk of malignant transformation which is 14-50%.)

(Among premalignant condition- oral submucous fibrosis has highest chance of malignant transformation.)

Answers

46.b	Infrahyoid	47.b	Continuous ...	48.c	Ludwigs ...
49.b	Posterior et...	50.c	Speckled e...		

Orthopedics

51. **Most reliable sign of compartment syndrome is**

a. Pulselessness
b. Pallor
c. Pain on passive stretch
d. Paresthesia

- *1st symptom of compartment syndrome is pain out of proportion after any injury.*
- *1st sign to appear in compartment syndrome is pain on passive stretch and is the most reliable sign.*
- *Most commonly compartment syndrome involves deep posterior compartment of leg > deep flexor compartment of forearm(FDP>FPL)*
- *Treatment: Fasciotomy*

Source: *Apley's System of Orthopaedics and Fractures. 9th edition pg 295*

52. **Which of the following muscle is involved in volkmann ischemia?**

a. Flexor digitorum profundus
b. Flexor digitorum superficialis
c. Lumbricals
d. Pronator teres

Volkmann's Ischemia

- *Ischemic injury to muscle and nerves of flexor compartment of forearm*
- *Caused by occlusion of brachial artery*

Pathophysiology

- *Diminished blood supply → Muscle Ischemia → Compartment Syndrome*

Signs of Volkmann's ischemia

- *Severe pain in forearm*
- *Require more dose of analgesics than usual is suggestive of developing compartment syndrome*
- *Pain in passive stretch*
- *Swelling and numbness over fingers*

FDP and FPL are the most vulnerable muscle to involve in volkmann ischemic contracture.

Most common nerve involved in VIC- Anterior interosseus nerve> Median > Ulnar.

Maheswory's Essential Orthopedics, 5th edition Page no 101

53. **Which of the following is not a late complication of colle's fracture?**

a. FDP tendon rupture
b. Carpel tunnel syndrome
c. Carpel instability
d. Sympathetic osteodystrophy

- ***Colles fracture:*** *Fracture of lower end of radius at its cortico-cancellous junction*
- *Most common complication of Colles fracture is stiffness of fingers > Malunion*
- ***Complications of Colles fracture:***
  - *Stiffness (most common)*
  - *Deformity (dinnerfork deformity)*
  - *Sympathetic osteodystropy*
  - *Tendon rupture (FDP)*
  - *Carpal Tunnel Syndrome*

Source: *Mehra's Quick review of Orthopaedics*

54. **A football player comes with history of pain in anterior part of knee for past 4 days. X-ray showing fragmentation of distal pole of patella. which of the following is the most likely diagnosis?**

a. Sinding-Larsen-johansson disease
b. Osgood's Schlatter's disease
c. Patellar tendinopathy
d. Infra-patellar bursitis

- *Sinding Larsen Johansson disease is apophysitis of the inferior pole of the patella. Xray may be normal or may show spur at the inferior pole of patella.*
- *Osgood-Schlatter disease is inflammation of the patellar ligament at the tibial tuberosity. Xray may be normal or may show fragmenation at the area of attachment at tibial tuberosity.*
- *Infrapatellar bursitis: Clergyman's knee*

51.c	Pain on pas...	52.a	Flexor digi...	53.c	Carpel ins...
54.a	Sinding-La...	55.a	Abduction, sl...	56.a	Student's el...
57.d	MRI				

55. **Which of the following is shoulder impingement position?**

a. Abduction, slight flexion and internal rotation
b. Adduction, slight flexion and internal rotation
c. Abduction and internal rotation
d. Adduction and internal rotation

➲ ***Impingement Syndrome***

Painful condition of rotator cuff impingement.

Repetitive compression or rubbing of tendons of supraspinatus under coraco-acromial arch

Impingement position: *Abduction and External/Internal rotation in Flexion*

➲ ***Pathophysiology***

Localised edema and swelling due to tendinitis

Scarring, Fibrosis and Calcification

Complete or Incomplete tear

*Secondary arthopathy(**Milwaukee Shoulder**)*

➲ ***Clinical Features***

Tendinitis(<40yrs): Anterior shoulder pain after activity with tenderness at supraspinatous anteriorly during extension, Painful arc

Chronic Tendinitis(40-50yrs): Repeated attacks of shoulder pain, more at night cannot lie on affected side, stiffness

*Tear(>45yrs): Can be partial or complete, difficulty abduction with **Abduction paradox**.*

(Abduction paradox: Patient is unable to initiate abduction at shoulder joint, but if the examiner abducts the shoulder by first 15°, then he/she can continue the remaining abduction by the help of deltoid muscle).

➲ ***Treatment***

Conservative: Rest avoiding painful activities, warm packs, Physiotherapy, NSAIDS, local steroids.

Surgical: Acromioplasty, Debridement, Rotator cuff repair

Ref: *Apley's System of Orthopedics and Fracture,9th edition, pg341*

56. **Which of the following is olecranon bursitis?**

a. Student's elbow
b. Golfers elbow
c. Tennis elbow
d. None

Student's elbow/ Miner's elbow- Olecrann bursitis

Golfers elbow - medial epicondylitis

Tennis elbow-lateral epiconndylitis

Clergymans knee- Infrapatellar bursitis (@ IC)

Housemaids knee- Prepatellar bursitis (Commonest bursitis) (@ pH)

Weaver's bottom- Ischial bursitis

Tailor's ankle- Lateral malleolus bursitis

Bunion- 1st metatarsal head bursitis

Bunionette- 5th metatarsal head bursitis

Tubercular bursitis is most common in trochanteric bursa

Source: *Mehra's Quick review of Orthopaedics*

57. **Investigation of choice for perthe's disease**

a. Xray
b. USG
c. CT-scan
d. MRI

➲ *MRI is the investigation of choice in Perthe's disease.*

➲ *At 1st X-ray may seem normal, though subtle changes such as widening of joint space and slight assymetry of ossification centres are usually present. The classical feature of increased density (sclerosis) of ossification nucleus occurs later and may be accompanied by fragmentation or crescentic subarticular fracture. The head tends to flatten and enlarge.*

Source: *Mehra's Quick review of Orthopaedics*

Answers

51.c	Pain on pas...	52.a	Flexor digi...	53.c	Carpel ins...
54.a	Sinding-La...	55.a	Abduction, sl...	56.a	Student's el...
57.d	MRI				

Anesthesia

58. **Contraindication for epidural catherization is**

a. Cardiac failure
b. Coagulopathy
c. Sickle cell disease
d. Diabetes

➲ *Absolute contraindication for spinal and epidural catherization:*

Patient refusal

Coagulopathy (INR > 1.2- don't give epidural)

Infection at needle site

Severe maternal hypovolemia

Source: *Ajay Yadav textbook of Anesthesia, 6th edition, pg 177*

59. **Inhalational induction agent of choice is**

a. Halothane
b. Nitrous oxide
c. Isoflurane
d. Sevoflurane

➲ *Sevoflurane is non-pungent and sweet smelling. Hence it is preferred in induction of anesthesia, particularly in children.*

Inhalational agents:

➲ *Sevoflurane: agent of choice in asthmatics, in neurosurgery and in hepatic patients. Not used in renal patients: produces substance A which is nephrotoxic*

➲ *Isoflurane: agent of choice in cardiac patients*

➲ *Desflurane: agent of choice in old age, prolonged surgeries, in renal patients and patients in shock*

➲ *Halothane: not used now a days due to following side effects*

sensitizes heart to adrenaline: c/I in cardiac patients

halothane shakes: post operative shivering

halothane hepatitis

Source: *Ajay Yadav textbook of Anesthesia, 6th edition, pg 92*

58.b	Coagulopathy	59.d	Sevoflurane	60.d	50%
61.c	Ketamine	62.c	III	63.c	Bronchopleural fistula
64.b	Superior venacava	65.c	Capnography		

60. Normal oxygen flow through simple face mask is
a. 21% b. 36%
c. 41% d. 50%

- **Oxygen therapy:**
  - *Low flow: flow depends on tidal volume and breathing rate. Eg: nasal canula, face mask*
  - *High flow: constant % of oxygen is delivered independent of breathing rate. Eg: ventury mask, t-piece*
- **FIo2: 20% + (4* oxygen liter flow)**
  - *Nasal canula: 1-6l/min= 24-44% O2*
  - *Face mask: 5-10 l/min= 40-60% O2*
  - *Partial re-breathing mask: 80% O2*
  - *Non re-breathing mask: 95-100% O2*
  - *Venturi mask: 24-50%*

AKA MC mask, Medium concentration mask, Mary Caterall mask. Oxygen supplied to the patient will be of variable concentration depending on the flow of oxygen and the patient's breathing pattern. The concentration can be changed by increasing or decreasing oxygen flow between 5-10 L/min. simple face mask is suitable for patient with type 1 RF but not in type 2 RF.

Source: *Clinical Anesthesia Lecture Notes 5th edition*

61. Which of the following is used in case of shock?
a. Propofol b. Thiopentone
c. Ketamine d. Halothane

- **Ketamine**
  - *Only anesthetic agent that increases Heart rate, BP and Cardiac output. Hence* ***used in the case of shock.***
  - ***Increases intracranial and intraocular tension****: c/I in raised ICP*
  - *Causes* ***broncho-dilation****: induction agent of choice in patients with severe bronchial asthma needing RSI.*
- ***IV Anesthetics:***
  - *Bronchodilators: propofol and ketamine*
  - *Most cardiac stable agent: Etomidate*
  - *Most neuroprotective: Thiopentone*
  - *Used in day care surgery: Propofol*

Source: *Ajay Yadav textbook of Anesthesia, 6th edition, pg 112*

62. A patient is assessed one day before surgery. On opening the mouth fully, hard and soft palate are visible. Mouth opening according to Mallampatti Grading falls into grade
a. I b. II
c. III d. IV

Mallampatti Grading:
- *Grade I: faucial pillars, soft palate and uvula are seen*
- *Grade II: faucial pillars and soft palate are seen*
- *Grade III: only soft palate*
- *Grade IV: only hard palate*

Source: *Ajay Yadav textbook of Anesthesia, 6th edition, pg 53*

63. The use of nitrous oxide in the operation of lung injury is contra indicated due to the risk of
a. Pulmonary hemorrhage
b. Lung abscess
c. Bronchopleural fistula
d. Pulmonary cyst

- *Compliant spaces such as gut, pleural and peritoneal cavity and non compliant spaces such as middle ear cavity and brain can develop very high pressure following nitrous oxide inhalation as 1 mole of N2 is replaced by 35 moles of nitrous oxide. Therefore, Nitrous oxide is contraindicated in pneumothorax, pneumoperitoneum, pneumoencephalocele, Middle ear surgeries and tympanoplasties, posterior fossa surgeries, laparoscopic surgeries, diaphragmatic hernia, eye surgeries, microlaryngeal surgeries. Bronchopleural fistula is very notorious to cause pneumothorax. So, the answer is bronchopleural fistula.*

Source: *Ajay Yadav textbook of Anesthesia, 6th edition, pg 97*

64. Central venous cathether (CVP) measures the pressure of
a. Inferior venacava b. Superior venacava
c. Left atrium d. Right ventricle

CVP measures the pressure of right atrium.

Sites:
- *Internal Jugular vein*
- *Subclavian vein*
- *Femoral vein*
- *Basilica vein*
- *External juglar*

65. Tracheal Intubation is best confirmed by:
a. Chest Expansion b. Auscultation
c. Capnography d. Spirometry

- *Capnography is the surest method to confirm tracheal intubation.*
- *Only expired air has high concentration of CO_2.*
- *Capnography is based on measurement of $ETCO_2$ (End Tidal CO_2)*
- *Normal $EtCO_2$ = 35-42*

Source: *Ajay Yadav textbook of Anesthesia, 6th edition, pg 62*

Answers

58.b	Coagulopathy	59.d	Sevoflurane	60.d	50%
61.c	Ketamine	62.c	III	63.c	Bronchopleural fistula
64.b	Superior venacava	65.c	Capnography		

Dental

66. Ring around anterior incisor teeth is seen in

a. Erythroblastosis fetalis
b. Polycythemia vera
c. Plummer Vinson Syndrome
d. Pernicious Anemia

Oral manifestations of Hematological Disorders:

- *Polycythemia: erythema of oral mucosa, glossitis, gingivitis, bleeding*
- *Pernicious anemia: glossitis, Beefy red tongue,* ***Hunter's glossitis*** *(papilla undergoes atrophy with loss of papilla with glossodynia), xerostomia, aphthous ulcer.*
- *Aplastic anemia: oral mucosa pallor, petechiae, oral candidiasis, herpetic lesions, gingival hyperplasia, bleeding, oral grey necrotic membranes.*
- *Thalassemia: excessive overgrowth of maxilla leading to excessive lacrimation,* ***chipmunk facies,*** *nasal stiffness*
- *SCD: orofacial pain, gingival enlargement, parasthesia of mental nerve,* ***delayed eruption, enamel hypoplasia, mongoloid facies, osteomyelitis,, asymptomatic pulp necrosis and severe malocclusions.***
- *IDA: angular cheilitis, glossitis, cheilosis*
- ***Plummer Vinson:*** *atropic glossitis, angular cheilitism, dysphagia d/t esophageal webs*
- *Erythroblastosis Fetalis:* ***Rh hump (hypoplasia involves the incisal edges of anterior teeth and middle portion of the deciduos cuspids and first molar crown),*** *deposition of blood pigment in enamel and dentine.*

Source: *International Journal of research in Dentistry (Oral manisfestations of Hematological Disorders- RBS disorders, Smit Singla et all)*

67. The involuntary habitual grinding of teeth typically at night is called

a. Attrition
b. Erosion
c. Bruxism
d. Abrasion

- *Attrition: loss of tooth surface caused by physical tooth to tooth contact.*
- *Erosion: irreversible loss of tooth structure due to chemical dissolution by acids not of bacterial origin.*
- *Abrasion: loss of tooth structure secondary to the action of an external agent, most commonly tooth brushing.*

Source: *Dental notes, Sooga Musa*

Answers			
66.a	Erythroblastosis ...	67.c	Bruxism

Psychiatry

68. A man taking drugs for BPAD came to your OPD with complaints of hairfall. Which one of the following drug is responsible for this?

a. Lithium carbonate
b. Carbamazipine
c. Divalproex sodium
d. Diazepam

- ***Hairloss in pshyciatry medications:***
  Lithium carbonate: about 20%
  Valproate: about 12%
  Carbamazepine: about 6%
  *(**Reference**: Mercke Y, et al. Ann Clin Psychiatry, 2000, Pubmed)*
- ***Phenytoin causes hirsutism.***
- ***Side effects of lithum:*** *@LITH*
  L: leukocytosis, loss of hair
  I: insipidus (nephrogenic DI)
  T: tremor/teratogenic (Ebstein's anomaly)
  H: Hypothyroidism

69. A 22 years male came to your OPD. According to him, an alien from another planet is in contact with him and the alien took his thought and expresses his thought to the public. The person feels that it is possible in this age due to scientific innovation. What is the most likely condition?

a. Thought insertion
b. Thought broadcast
c. Somatic passivity
d. Delusion of reference

- ***Thought insertion:*** *a person's belief that alien thoughts have been put into his or her mind (thoughts are implanted into his mind by external force)*
- ***Thought broadcast:*** *the person experiences his thoughts are withdrawn from his mind and then ,in some way, made public and projected over a wide area.*
- ***Somatic passivity:*** *it is the belief that outside influences are playing on the body.*
- ***Delusion of reference:*** *belief that other persons are talking about him.*

  (In this case the persons feel that his thoughts are being expressed to the public. So the answer is thought broadcast.)

Answers			
68.a	Lithium carbonate	69.b	Thought broadcast

Community Medicine

70. Type of epidemiological surveillance done to identify missed cases is:

a. Active Surveillance
b. Contact tracing
c. Sentinel surveillance
d. Deep Surveillance

- *Surveillance: The continuous scrutiny of factors that determine the occurrence and distribution of disease and other conditions of ill health.*
- *Sentinel Surveillance*
  Done to identify missing cases.
  The sentinel data is extrapolated to the entire population to estimate the disease prevalence in the total population
- *Contact Tracing*

Contact tracing ... identification of persons who may have come into contact with an infected person ("contacts") and subsequent collection of further information about these contacts.

By tracing the contacts of infected individuals, testing them for infection, treating the infected and tracing their contacts in turn, public health aims to reduce infections in the population.

Diseases for which contact tracing is commonly performed for include tuberculosis, vaccine-preventable infections like measles, sexually transmitted infections (including HIV), blood-borne infections, some serious bacterial infections, and novel infections (e.g. SARS).

Ref: Park's Textbook of preventive and social medicine, 24th edition page no 457

71. True regarding Diphtheria carrier is all EXCEPT:

a. Diphtheria carrier must be treated with antibiotics
b. Immunization prevents the occurrence of carrier
c. Most of the transmission occurs via carriers
d. Most dangerous are the Nasal diphtheria carrier

Facts about diphtheria carriers:

- *People who harbor Corynebacterium diphtheriae but lack specific signs and symptoms.*
- *Most of the carriers belong to Faucial diphtheria and they are the most dangerous type due to high risk of toxemia*
- *Transmission to healthy individual mostly occurs via the carriers*
- *Incidence of diphtheria is declining due to immunization via Diphtheria toxoid to infants*
- *All the cases of Diphtheria carriers must be treated with Erythromycin within 10days of exposure*

***Ref:** Harrison's principle of Internal medicine, 20th edition, page no 1095*

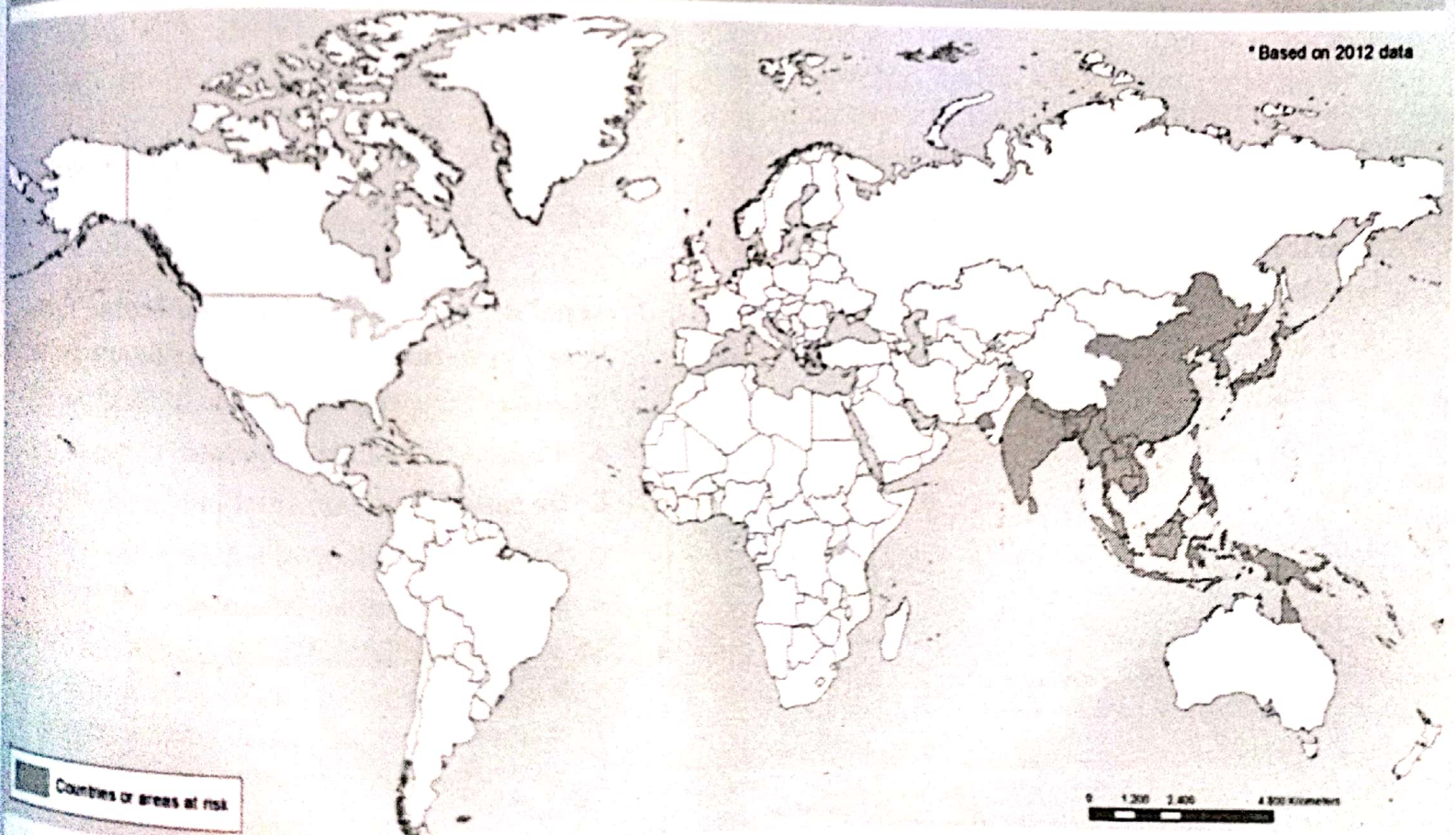
72. Japanese Encephalitis is endemic in the Terai belt of Nepal. True regarding the distribution of JE is:

a. Subsaharan African countries
b. Farming lands of Asia
c. Tropical areas above and below the equator
d. Subtropical areas of the world

70.c	Sentinel ...	71.d	Most dangero...	72.b	Farming land...
73.b	Mean and SD	74.a	Initiation, Pla...	75.c	Environment
76.b	Usually the ...	77.b	50 parts per ...	78.c	Measles rubel...
79.c	Dengue				

- *Japanese encephalitis virus is the leading cause of viral encephalitis in Asia and occurs in almost all Asian countries (see map). Transmission occurs principally in rural agricultural locations where flooding irrigation is practised – some of which may be near or within urban centres.*

Japanese encephalitis, countries or areas at risk*



73. Two important indicators determining the nature of Normal distribution curve are:

a. Range and SD
b. Mean and SD
c. Mean and Range
d. Median and SD

70.c	Sentinel ...	71.d	Most dangero...	72.b	Farming land...
73.b	Mean and SD	74.a	Initiation, Pla...	75.c	Environment
76.b	Usually the ...	77.b	50 parts per ...	78.c	Measles rubel...
79.c	Dengue				

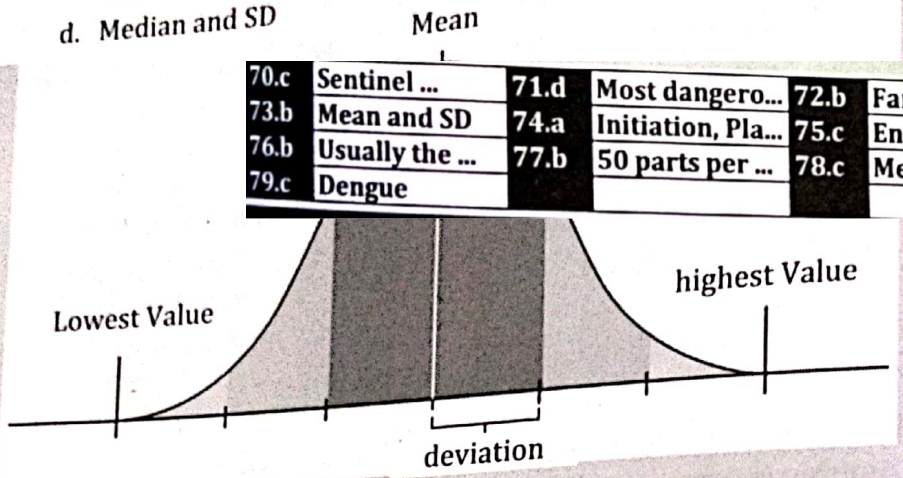


Fig: Normal Distribution Curve

Ref: *Park's Textbook of preventive and social medicine, 24th edition*

74. Components of Project Cycle is: I M E

a. Initiation, Planning Implementation, Monitoring and Evaluation
b. Initiation, Planning, Implementation, Evaluation, Review and Reflection
c. Initiation, Planning, Implementation, Monitoring, Review and reflection
d. Initiation, Planning, Implementation and evaluation

➲ *Option a is the best choice among all. Review and reflection are not a part of project cycle. Every project cycle ends with closure i.e Reporting which was not mentioned in any of the 4 options. Had reporting been included in option a it would have been the most complete answer. Nonetheless, we are asked to choose the best option anyway.*

75. Physical, Chemical and Biological Factors refers to which epidemiological component:

a. Agent
b. Host
c. Environment
d. Population

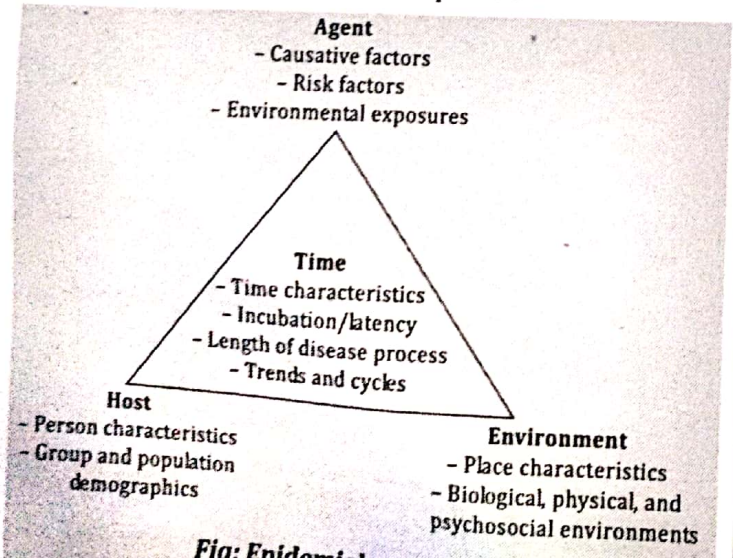


Fig: Epidemiological Triad

76. Single exposure point source epidemics is characterized by all except:

a. Exposure to the same source over a brief time
b. Usually the source is a Carrier
c. The total number of cases peaks up rapidly and falls slowly with a plateau
d. Most cases occurs within one incubation period

Point Source Outbreak.

➲ *Persons are exposed to the same source over a brief time, such as through a single meal or at an event.*
➲ *The number of cases rises rapidly to a peak and falls gradually.*
➲ *Most cases occur within one incubation period.*

Ref: *Park's Textbook of preventive and social medicine, 24th edition, Page no 324*

77. Nepal Government had started Iodine fortification in salt to reduce the cases of endemic goiter. What is the concentration of iodine in fortified salt?

a. 45 parts per million of Iodine
b. 50 parts per million of Iodine
c. 55 parts per million of Iodine
d. 60 parts per million of Iodine

➲ *WHO/UNICEF/ICCIDD recommends that the salt iodine content at the packaging level must be 50-60 ppm and 20-30 ppm at the retail shops, to achieve at least 15 ppm in the household dietary consumption.*
➲ *Nepal Government acknowledges this recommendation and has started iodine fortification in commercial saltat the concentration of 50 parts per million according to Food Act 1967.*

Ref: *MoHP Nati...*

78. According to current EPI schedule, in 9 months of age, which vaccine is administered to the child?

a. Measles
b. Measles, Rubella and Japanese Encephalitis
c. Measles rubella and Pneumococcal vaccine
d. Measles Rubella

National Immunization Schedule of Nepal

S.N	Vaccine	Age after birth	Dose	Route
1	BCG	Immediately or within 45 days	0.05ml	Intradermal
2	DPT+HepB+Hib	6, 10, 14 weeks	0.5ml	Intramuscular
3	Oral Polio	6,10,14 weeks	0.5ml	Oral
4	PCV	6,10 week and 9 month	0.5ml	Intramuscular
5	fIPV	6, 14 weeks	0.5ml	Intradermal
6	Rota virus	6,10 weeks	0.5ml	Oral
7	Measles, Rubella(MR)	9, 15month	0.5ml	Subcutaneous
8	Japanese Encephalitis	12-23 month	0.5ml	Subcutaneous

Ref: DoHS Annual Report 2075/76

79. Aedes aegypti is the vector of:

a. Malaria
b. Kalazar
c. Dengue
d. Filariasis

- Aedes is Vector of: Dengue, Zika virus, Yellow fever and Chikunguniya
- Malaria: Female Anopheles
- Kalazaar: Sandfly(Phlebotomus argentipus)
- Filaria: Culex quinquefasciatus

Source: Davidsons Principles and practices of medicine, 23rd edition. Pg 244

Answers

70.c	Sentinel ...	71.d	Most dangero...	72.b	Farming land...
73.b	Mean and SD	74.a	Initiation, Pla...	75.c	Environment
76.b	Usually the ...	77.b	50 parts per ...	78.c	Measles rubel...
79.c	Dengue				

Medicine

80. In metabolic syndrome, all of the following occurs except:

a. Increased blood sugar
b. Increased TG
c. Decrease in uric acid
d. Decreased HDL

- Metabolic syndrome includes Hypertension, Dyslipidemia (characterized by increased LDL and TG, decreased HDL), non alcoholic fatty liver disease and in women PCOS. This cluster is also termed as insulin resistance syndrome and is much more common in patients who are obese.

Source: Davidsons principles and practice of Medicine, 23rd edition, pg 730

81. A 32 year female presented with progressive painless weakness of bilateral lower limbs. At present she has a difficulty to rise from her seat and difficulty to swallow. However she doesn't complain of rash and visual problem. On investigation CK=5000U/l. The most likely diagnosis is:

a. GBS
b. Myasthenia gravis
c. Hypothyroidism
d. Polymyositis

- Dermatomyositis and polymyositis are characterized by an inflammatory process affecting skeletal muscle.
- Polymyositis presents with symmetrical proximal muscle weakness usually affecting lower limbs more than the upper.
- Age on onset is between 40-60yrs.
- Systemic features of fever, weight loss and fatigue are present.
- Dermatomyositis presents similarly but in combination with skin lesions. These include Gottrons papule (scaly, erythematous or violaceous, psoriasiform plaques occurring over the extensor surfaces of PIP and DIP joints) and a heliotrope rash (violaceous discoloration of eyelid in combination with periorbital edema).

Source: Davidsons principles and practice of Medicine, 23rd edition pg 1039

82. The factor that affects the long term outcome in Dermatomyositis is:

a. Presence of rash
b. Dysphagia
c. CK level
d. Age at onset

- Dermatomyositis may spontaneously remit in as many as 20% of affected patients. About 5% of patients have a fulminant progressive course with eventual death. However, patients who survive the disease may experience residual weakness and disability. Children with severe dermatomyositis may develop contractures. Therefore, many patient require long term therapy. Risk factors for a poorer prognosis in patients with dermatomyositis include:
  - An associated malignancy
  - Cardiac, pulmonary or esophageal involvement
  - Older age(>60 yrs)

Source: Davidson principles and practices of medicine, 23rd edition 1039

83. A 46 year male presented with sudden onset painful swelling of Right great toe. He describes the pain as worst pain ever and he is unable to wear a sock or to let bedding rest on the joint. He also has reflux esophagitis, GI bleed and COPD. On investigation uric acid=8.8mg/dl, Creatinine=2.9 gm/dl, RBS=110mg/dl. Which of the following is the best management?

a. Indomethacin 50 mg TDS
b. Prednisolone on tapering doses
c. Aceclofenac 100 mg BD
d. Allopurinol 300 mg/day

80.c	Decrease in...	81.d	Polymyositis	82.b	Dysphagia
83.b	Prednisolo...	84.b	Infection		

84.b Infection | 85.a Dysphagia, Dyspnea, ... | 86.d HRCT chest | 87.b Alcoholic ... | 88.d Enalapril

➲ *There is no exact answer to this question. All of the A,B,C cant be used due to the presence of GI bleed and raised creatinine. And option D is not useful for acute presentation and it increases pain as well. So here the best answer can be the use of Prednisolone along with a PPI as it is useful for COPD as well and later shifting to Febuxostat.*

84. **Most common cause of death in Rheumatoid Arthritis:**

a. Cardiovascular disease b. Infection
c. Respiratory disease d. GI disease

➲ *The mainstay of treatment in RA comprises the early use of small molecule DMARDs and corticosteroids for induction of remission. Use of corticosteroid predisposes the patient to risk of infection that is the most likely cause of death.*

Source: *Davidsons principles and practices of Medicine, 23rd edition pg 1023*

85. **A 46 year female has a history of dyspnea and chronic cough for 2 years and recurrent pneumonia. She had pneumonia when she was 15 yrs of age. Which of the following doesnot support the diagnosis of bronchiectasis over emphysematous changes in lungs?**

a. Dyspnea, chronic cough without purulent sputum
b. Tramlines on Xray
c. Massive hemoptysis
d. Clubbing

Symptoms of bronchiectasis:

➲ *Cough: chronic, daily, persistent*
➲ *Sputum: copious, continuously purulent*
➲ *Pleuritic pain: when infection spreads to involve pleura, or with segmental collapse due to retained secretions*
➲ *Hemoptysis:*
Streaks of blood common, larger volumes with exacerbations of infection
Massive hemoptysis requiring bronchial artery embolization sometimes occurs
➲ *Infective exacerbation: increased sputum volume with fever, anorexia, malaise, anorexia*
➲ *Halitosis: frequently accompanies purulent sputum*
➲ *General debility: difficulty maintaining weight, anorexia, exertional breathlessness*
➲ *In advanced disease, thickened airway walls, cystic bronchiectatic spaces, consolidation and collapse is visible in Xray*
➲ *CT (more sensitive): signet ring sign, tram line appearance, honeycomb appearance*

Source: *Davidsons principles and practices of Medicine, 23rd edition pg 579*

86. **A 52y F presented with complain of chronic dry cough for 2 years. At present she gets short of breath when she walks for 200 m. She is a smoker for 20 yrs and hypertensive under Amlodipine. On auscultation bilateral inspiratory coarse crackles are heard. Which of the following investigation helps to guide the management plan?**

a. Pre and post exercise pulse oximetry
b. Spirometry before and after bronchodilatation
c. CXR PA view
d. HRCT chest

The given case is typical of DPLD.

Features common to the diffuse parenchymal lung diseases

Clinical presentation

➲ *Cough: usually dry, persistent and distressing*
➲ *Breathlessness: usually slowly progressive; insidious onset; acute in some cases*

Examination findings

➲ *Crackles: typically bilateral and basal*
➲ *Clubbing: common in idiopathic pulmonary fibrosis but also seen in other types, eg: asbestosis*
➲ *Central cyanosis and signs of right heart failure in advanced disease*

Radiology

➲ *Chest X-ray: typically small lung volumes with raticulonodular shadowing but may be normal in early or limited disease*
➲ *High-resolution computed tomography: combinations of ground glass changes, reticulonodular shadowing, honaycomb cysts and traction bronchiectasis, depending on stage of disease*

Pulmonary function

➲ *Typically restrictive ventilatory defect with reduced lung vloumes and impaired gas transfer; exercise tests assess exercise tolerance and exercise-related fall in S_3O_2*

Source: *Davidson principles and practices of Medicine, 23rd edition, pg 605*

87. **A 38 year businessman came for routine examination in which liver is found to be enlarged. On investigation:**

T Bil=1.2 mg/dl (N<1.1 mg/dl)
AST=78 U/l (N=5-40)
ALP= 310 (N=25-300)
GGT=950 (N=9-48)

Which of the following is the likely diagnosis?

a. Viral hepatitis b. Alcoholic liver disease
c. Choledocholithiasis d. Cholelithiasis

➲ ***Investigations in ALD:*** *AST > ALT, High MCV, GGT rise. Determining the extent of liver damage often requires biopsy.*

88. **A lady presented with hypertension, mild edema and microscopic hematuria. On renal biopsy it was found to be GN secondary to FSGS. Which of the following is the most effective treatment?**

a. Predsinolone b. Cyclosporine
c. Cyclophosphamide d. Enalapril

➲ *FSGS refers to a pattern of renal injury characterized by*

glomeruli (focal) and some part of the glomerulus but not all (segmental).

- In patients with primary or secondary FSGS and proteinuria (nephrotic or non nephrotic) the initial approach consists of optimal BP control and the use of ACE-I/ARB. For patients who remain nonnephrotic or become nonnephrotic after 6 months of therapy, this remains the primary therapeutic approach.
- In patients with secondary FSGS and nephrotic range proteinuria, the mainstay of treatment remains BP control and ACEIs and ARBs, along with disease specific treatment if available (eg ART in HIV associated nephropathy). Patients who are persistently nephrotic after a course of conservative therapy or who present with complications from nephrotic syndrome require more aggressive treatment with prednisolone or immunosuppressive agents.
- So simply saying the order of agents used is: ACE-I/ARB and other nonspecific measures----Prednisolone---- cyclophosphamide mostly.
- Recently calcium channel inihibitors are also found effective in its treatment.

Source: UpToDate

89.A patient presents as CCF III. Which of the following agent used in management of heart failure is not related to long term survival?

a. Digoxin
b. Beta blocker
c. ACE-I
d. Spironolactone

Benefits of using beta blockers in CHF:

- Control tachycardia and effect of high catecholamines level
- Has beneficial effect in remodeling
- Decrease risk of sudden cardiac death

Benefits of Using ACE inhibitors:

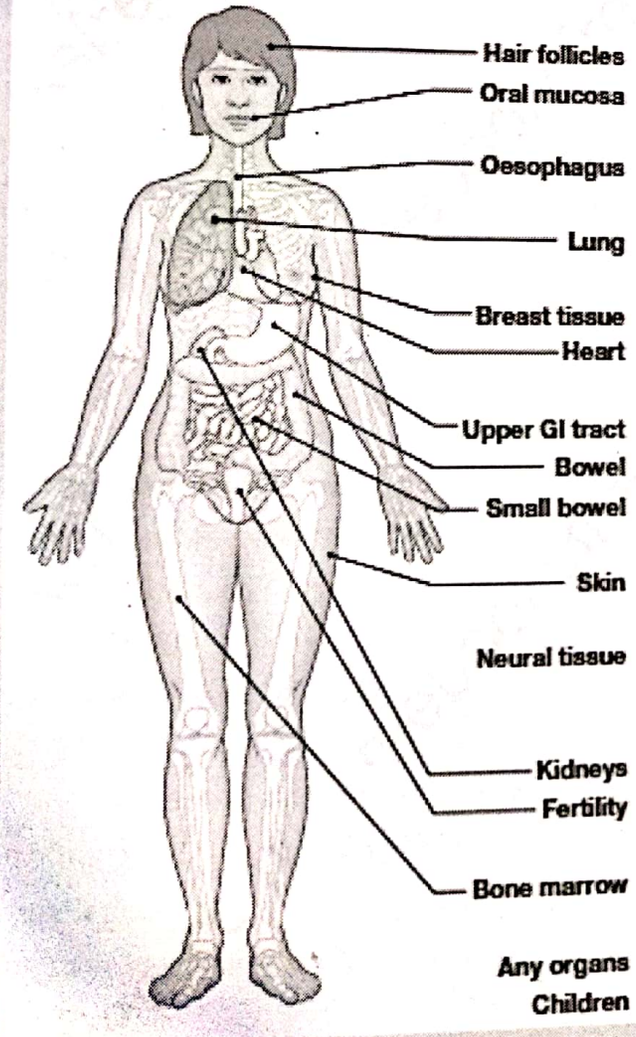
- Consider in all patients with LV systolic failure, improves symptoms and prolongs life
- Reduces afterload
- Digoxin decreases overall morbidity but has no role in long term survival.

90.A 50 yrs male patient presented with diagnosis of Non Hodgkins Lymphoma and was started on chemotherapy containing cyclophosphamide, vincristine, doxorubicin and prednisolone. He complains of oral lesions and diarrhea. On examination he is found to have mucosal ulceration. What is the likely cause?

a. Pseudomembranous enterocolitis
b. Vit B12 deficiency
c. Side effect of chemotherapy
d. Clostridium difficile infection

86.d	HRCT chest	87.b	Alcoholic ...	88.d	Dyspnea, ... Enalapril
89.a	Digoxin	90.c	Side effect ...	91.b	Methanol
92.a	De Quervain ...	93.b	Polycythemi...		

Side effects of chemotherapy:



	Chemotherapy (often drug-specific)	Radiotherapy
Hair follicles	Alopecia	Alopecia
Oral mucosa	Mucositis	Mucositis Xerostomia
Oesophagus	Mucositis	Mucositis Strictures
Lung	Fibrosis	Cough Fibrosis
Breast tissue		↑ Risk breast cancer
Heart	Arrhythmias Heart failure	↑ Risk ischaemic heart disease
Upper GI tract	Nausea and vomiting	
Bowel	Mucositis, diarrhoea	
Small bowel		Nausea, diarrhoea Fibrosis and perforation
Skin	Erythema	Erythema and desquamation Telangiectasia, thinning of the skin
Neural tissue	Sensory neuropathy Motor neuropathy Nerve deafness	
Kidneys	Renal impairment	
Fertility	Premature gonadal failure Amenorrhoea	Premature gonadal failure
Bone marrow	Neutropenia, anaemia Thrombocytopenia	Neutropenia ↓ Haemoglobin, platelet count
Any organs		Increased risk of malignancy
Children		Reduced growth

Fig: Adverse effects of chemotherapy and radiotherapy. Acute effects are shown in pink and late effects in blue.

...of medicine, 23rd edition pg 1331

91.A 36 year male presented with sudden onset severe abdominal pain and decreased vision. His wife mentioned that he came home late last night and had drunk alcohol from a local shop. On examination he had tenderness on the upper abdomen and echhymoses over right flank. What is the drink that he had taken?

a. Ethanol
b. Methanol
c. Isopropyl alcohol
d. Ethylene glycol

➲ *Methanol poisoning: Headache, delirium, vertigo, **visual impairment and photophobia**, a/w optic disc and retinal edema and impaired pupil reflexes. Blindness, pancreatitis and bnormal LFT.*

➲ *Ethylene glycol: Ophthalmoplegia, CN palsies, hyporeflexia and myoclonus, ATN, hypocalcemia, hypomagnesemia, and hyperkalemia.*

***Source**: Davidson principles and practices of Medicine 23rd edition, pg 147*

92.The self limiting thyroiditis is:

a. De Quervain Thyroiditis
b. Riddle thyroiditis
c. Hashimoto thyroiditis
d. Suppurative thyroiditis

Inflammation/ Infection of Thyroid:

1. ***Acute***

   Bacterial thyroiditis

   Viral thyroiditis (Subacute)/ De Quervain/ Granulomatous

2. ***Chronic***

   Hashimotos autoimmune thyroiditis

   Riedels thyroiditis

➲ *De Quervain thyroiditis: Inflammation of thyroid gland occurs and colloid and stored thyroid hormones are released. Also follicular cells are damaged and there is impaired synthesis of new thyroid hormones. As a result, T4 and T3 levels are raised for 4-6 weeks until the pre-formed colloid is depleted. Thereafter there is usually a period of hypothyroidism of variable severity before the follicular cells recover and normal thyroid [illegible]*

Answers

94.b	Gas	95.c	12-14 mmHg	96.a	Hyperparat...
97.b	Migratory ...	98.a	Colon cut off ...	99.a	Prostate Ca
100.a	TB ureter	101.a	CECT abd...		

93.A 35years old female presented with complains of headache, difficult breathing, restlessness and pruritus after taking hot bath. She also has features of palmar erythema and facial redness. On investigation Hb: 18.6gm/dl, PCV: 56%, WBC: 14,000/cumm and Platelets 460,000/cumm. Most likely diagnosis is:

a. Relative Polycythemia
b. Polycythemia vera
c. Myelofibrosis
d. Chronic myeloid Leukemia

➲ *Males and females with Hct values of over 0.60 and over 0.56, can be assumed to have an absolute erythrocytosis.*

➲ *A clinical history and examination will identify most patients with polycythemia secondary to hypoxia.*

➲ *The presence of hypertension, smoking, excess alcohol consumption and/or diuretic use is consistent with low volume/ relative polycythemia (Gaisbock's syndrome).*

➲ *In PRV, a mutation in a kinase, JAK-2 V617F, is found in over 90% of cases. Patients with PRV have an increased risk of arterial thrombosis, particularly stroke, and venous thromboembolism.*

➲ *They may have aquagenic pruritus (worse after a hot bath), hepatosplenomegaly and gout (due to high red cell turnover).*

***Source**: Davidson principles and practices of Medicine 23rd edition, pg 970*

Answers

80.c	Decrease in...	81.d	Polymyositis	82.b	Dysphagia
83.b	Prednisolo...	84.b	Infection	85.a	Dyspnea, ...
86.d	HRCT chest	87.b	Alcoholic ...	88.d	Enalapril
89.a	Digoxin	90.c	Side effect ...	91.b	Methanol
92.a	De Quervain ...	93.b	Polycythemi...		

Surgery

94.Mercedes Benz sign in gall stone disease is due to

a. Mucin
b. Gas
c. Bacteria
d. Water crystal

➲ *The centre of stone may contain radiolucent gas in a triradiate or biradiate fissure and this gives rise to characteristic dark shapes on radiograph: the "Mercedes-Benz" or "Seagull" sign.*

***Source**: Bailey and Love's short practice of Surgery, 27th Edition*

95.What is the intra-abdominal pressure during laproscopic surgery?

a. 0-4 mmHg
b. 8-10 mmHg
c. 12-14 mmHg
d. 18-20 mmHg

***Source**: Bailey and Love's Short Practice of Surgery, 27th edition, pg 1202*

96.Pancreatic calcification is seen in

a. Hyperparathyoidism
b. Pancreatic pseudocyst
c. Pancreatic Ca
d. Alcoholism

➲ *If Chronic pancreatitis would have been present in option that would have been the best answer. But as chronic pancreatitis is not in option so best ans is hyperparathyroidism.*

97. Which of the following is not a hemodynamic threat but shows harbouring malignancy?

a. Phlegmasia cerula dolens
b. Migratory Superficial thrombophlebitis
c. DVT
d. PE

All options above may be present in malignancy but option a, c and d are hemodynamic threat whereas option b is not a hemodynamic threat.

- *Phlegmasia cerula dolens: Uncommon severe form of DVT resulting from extensive thrombotic occlusion of major and the collateral veins of extremities. An underlying malignancy may be present in 50% of the cases.*
- *Trousseau sign of malignancy: medical sign invoving episodes of vessel inflammation due to blood clot which are recurrent or appearing in different locations over time.(migratory thrombophlebitis). The location of clot is tender.*

***Source:** Wikipedia*

98. X-ray finding in acute pancreatitis

a. Colon cut off sign
b. Gas under diaphragm
c. Pleural effusion in right side
d. Gas inside layers of bowel wall

X-ray findings of Acute Pancreatitis:

- *Local ileus (Sentinel loop)*
- *Colon cut-off sign*
- *Renal halo*

Occasionally,

- *Calcified gall stones*
- *Pancreatic calcification*
- *pleural effusion (mostly on left side)*

***Source:** Bailey and Love's short practice of Surgery, 27th Edition pg 1224*

99. In which of the following carcinoma hormonal measure of treatment is done?

a. Prostate Ca
b. Bladder Ca
c. Colon Ca
d. Pancreatic Ca

- *Testosterone suppression therapy and androgen axis inhibitors can be used for treatment of prostate carcinoma. This is also called as "Medical Castration".Medical forms of androgen ablation have been available sincethe discovery of stilbestrol. The other commonly available treatments to reduce testosterone levels to the castrate range are LHRH agonists. These agents initially stimulate hypothalamic LHRH receptors but, because of their constant presence (rather than the normal diurnal rhythm), they then downregulate them, resulting in cessation of [illegible] ease in*

97.b	Migratory ...	95.c	12-14 mmHg	96.a	Hyperparat...
100.a	TB ureter	98.a	Colon cut off ...	99.a	Prostate Ca
103.b	Dermis	101.a	CECT abdom...	102.b	Galactocele

Source: Bailey and Love's short practice of Surgery, 27th Edition pg 1474

100. Golf hole ureter is seen in

a. TB ureter
b. Ureteric polyp
c. Ureteric stone
d. Retroperitoneal fibrosis

- *Fibrosis of urethral orifice can lead to stricture formation visible as golf hole ureter in cystoscopy. This is seen in Tuberculous infection.*
- ***Tuberculous Urinary Infection:***

  *Tuberculous urinary infection is secondary to renal tuberculosis. Early tuberculosis of starts around the ureteric orifice or trigone of bladder, the earliest evidence being pallor of mucosa due to submucous edema. In long standing cases, there is marked fibrosis which causes golf hole ureter and **thimble bladder.***

***Source:** Bailey and Love's short practice of Surgery, 27th Edition pg 1405*

101. A patient presented with blunt abdominal trauma with hematuria. What will be the best investigation?

a. CECT abdomen and pelvis
b. USG abdomen and pelvis
c. Intravenous Urogram
d. Retrograde Urethrogram

- *Renal trauma should be suspected in a patient with Blunt Abdominal trauma with hematuria. CT scan with contrast is the investigation of choice. It will accurately assess the extent of the injury, showing laceration, extravasation, surrounding haemorrhage and vessel injury. It also shows non-renal injuries and effectively stages renal pedicle injuries.*

***Source:** Bailey and Love's short practice of Surgery, 27th Edition*

102. Fat fluid level in mammograph is seen in

a. Oil cyst
b. Galactocele
c. Hamartoma
d. Lipoma

- *Due to difference in viscosity of fresh milk and fat, significant separation is seen visible as fat fluid level in mammograph.*

103. 2nd degree burn involves

a. Epidermis
b. Dermis
c. Subcutaneous tissue
d. muscle

Types of burn based upon depth of skin:

1. ***Superficial (first degree) burn***

   Limited to epidermal layeras

	TB ureter		Colon cut off ...	99.a	Prostate Ca
103.b	Dermis	101.a	CECT abdom...	102.b	Galactocele
106.a	s/c adrenaline	104.a	Bladder ...	105.a	Insulinoma

Without blister formation

Heals with in 3-6 days without scarring

2. ***Partial thickness (Second degree) burn***
   a. *Superficial Partial thickness*
      Involves superficial papillary dermis
      Blister, bulla formation
      Takes 7-10 days to heal and with hypo or hyper pigmented areas
   b. *Deep Partial thickness*
      Involves deeper reticular dermis
      Takes 3 or more weeks to heal
      Lead to hypertrophic scarring
3. ***Full thickness (third degree) burn***
   Burn extends to subcutaneous tissue
   Takes more than 3 weeks to heal
   Heals with a lot of scarring and contractures
4. ***Fourth degree burn***
   Extend to muscle and bone
   Needs debridement of eschar and skin grafting.

Source: *Sabiston Textbook of Surgery*

104. Urinary cytology is used for screening of following tumor:

a. Bladder Cancer
b. Renal Cell Carcinoma
c. Wilm's Tumor
d. Prostrate Cancer

➲ *Urinary cytology may show malignant cells in bladder carcinoma. This is not a good screening test but a positive result is highly specific.*

Source: *Bailey and Love's short practice of Surgery, 27th Edition*

105. Most common endocrine tumor of pancreas is:

a. Insulinoma
b. Gastrinoma
c. VIPoma
d. β cell of pancreas tumor

➲ *Insulinoma is the most common endocrine tumor of pancreas followed by gastrinoma.*

➲ *Whipple's triad: Symptoms of hypoglycemia after fasting or exercise, plasma glucose <2.8mmol/L and relief of symptoms on administration of glucose. It is typical clinical scenario of Insulinoma.*

Neuroendocrine tumours of the pancreas

Tumour (syndrome)	Incidence (%)	Presentation	Malignancy (%)
Insulinoma	70–80	Weakness, sweating, tremor, tachycardia, anxiety, fatigue, dizziness, disorientation, seizures	<10
Gastrinoma	20–25	Intractable or recurrent peptic ulcer disease (haemorrhage, perforation), complications of peptic ulcer, diarrhoea	60–80
Non-functional tumours	30–50	Obstructive jaundice, pancreatitis, epigastric pain, duodenal obstruction, weight loss, fatigue	60–90
VIPoma	4	Profuse watery diarrhoea, hypotension, abdominal pain	80
Glucagonoma	4	Migratory necrolytic skin rash, glossitis, stomatitis, angular cheilitis, diabetes, severe weight loss, diarrhoea	80
Somatostatinoma	<5	Cholelithiasis, diarrhoea, neurofibromatosis	50
Carcinoid	<1	Flushing, sweating, diarrhoea, oedema	90
ACTHoma	<1	Cushing's syndrome	>90
GRFoma	<1	Acromegaly	30

Source: *Bailey and Love's short practice of Surgery, 27th Edition, pg 849*

106. Drug of choice in anaphylactic shock is

a. s/c adrenaline
b. IV hydrocortisone
c. IV phenylephrine
d. IV theophylline

The drug of choice in anaphylactic shock is adrenaline by any route possible.

Uses of adrenaline:@ABCDEG

➲ *A: Anaphylactic shock: 0.5 mg 1:1000 undiluted Adrenaline via* ***im or sc route***

➲ *B: Bronchial asthma*

➲ *C: CPR: 1 mg 1;10000 over 3-5 minutes* ***iv, endotracheal or intraossoeus***

➲ *D:during local anesthesia combined with lignocaine: 1:200000*

➲ *E: Epistaxis, Elevate BP*

➲ *G: Glaucoma, open angle (1-2% eye drops)*

(IV hydrocortisone and IV anti-histaminics are second line drugs for anaphylactic shock)

Answers

94.b	Gas	95.c	12-14 mmHg	96.a	Hyperparat...
97.b	Migratory ...	98.a	Colon cut off ...	99.a	Prostate Ca
100.a	TB ureter	101.a	CECT abdom...	102.b	Galactocele
103.b	Dermis	104.a	Bladder ...	105.a	Insulinoma
106.a	s/c adrenaline				

107. Which hormone is responsible for Milk ejection?

a. Prolactin b. Somatostatin
c. Thyroxin d. Oxytocin

Prolactin induces milk secretion reflex.
Oxytocin induces milk ejection reflex.
Source: OP Ghai essential pediatrics, 8th edition, pg 150

108. A 2-day postpartum mother is worried about the yellowish brown discoloration of her breast milk. What is the milk called?

a. Colostrum b. Hind milk
c. Transitional milk d. Mature Milk

- *Colostrum: is the milk secreted during the initial 3-4 days after delivery. It is yellow, small in quantity. Thick and contains large amount of antibodies and vitamin A, D, E and K.*
- *Hind milk: comes later towards the end of the feed and is rich in fat and provides satiety to the child.*
- *Transitional milk: is the milk after 3-4 days until two weeks. The fat and sugar content is high.*
- *Mature milk: follows transitional milk, thinner and watery.*

Ref: OP Ghai 8th edition page number 153.

109. A 5 day old baby has started developing yellowish discoloration of body since 2 days. The mother says the baby is well and actively feeding. On examination there is no sign of dehydration. What is the cause of the discoloration of body?

a. Breastmilk jaundice b. Physiological jaundice
c. Sepsis d. Neonatal hepatitis

- *Breastmilk jaundice: occurs in 2-4% of exclusively breastfed term babies beyond 3rd-4th weeks of life. Breastfeeding should not be stopped either for diagnosis or treatment of breast milk jaundice.*
- *Physiological jaundice: Visible jaundice usually appears between 24-72 hours of age. Total serum bilirubin (TSB) level usually peaks by 3 days of age and then falls in term neonates. TSB levels are below the designated cut-offs for phototherapy. It does not require any treatment.*
- *Pathological jaundice: Appearance of jaundice within 24 hours of life. TSB levels have been arbitrarily defined as pathological, if it exceeds 5 mg/ dL on first day, 10 mg/ dL on second day, or 15 mg/ dL thereafter in term babies. Presence of any of the following signs indicates pathological jaundice:*

Clinical jaundice detected before 24 hours of age
Rise in serum bilirubin by more than 5 mg/ dL/ day
Serum bilirubin more than 15 mg/dL
Clinical jaundice persisting beyond 14 days of life
Clay-/white-colored stool and/or dark urine staining the clothes yellow
Direct bilirubin >2 mg/ dL at any time

Ref: OP Ghai, 9th edition page number 168

110. A 9 month old baby has fever for last 3 days. The fever has subsided and he has developed maculopapular rash all over the surface of body since 24 hours. What is your provisional diagnosis?

a. Erythema infectiosum b. Exanthem subitum
c. herpes simplex d. Measles

- *Causes of maculopapular rash in children with fever: Measles, rubella, dengue, roseola infantum, erythema Infectiosum, drug rash, infectious mononucleosis, chikungunya, HIV, adenoviral and enteroviral Infections, Mycoplasma pneumoniae, secondary syphilis, brucellosis, scrub typhus, chronic hepatitis B, CMV, lupus, systemic ,JRA*
- *Measles: The rash usually appears on 4th day with increase in fever as faint reddish macules behind the ear.*
- *Exanthema subitum(Roseola infantum) : The classic clinical illness is heralded by high fever ranging from 38°C to 40°C associated with febrile seizures in 5-10% and lasting fordays. Fever declines abruptly and is followed by development of a rash within 12-24 hours.*
- *Erythema infectiosum: AKA fifth disease, caused by parvovirus B19. It usually affects children between age 5-15 years. The prodromal phase is characterized by low grade fever, headacheand mild URTI. The characteristic rash arises as the erythematous flush around cheeks giving a slapped cheek appearance.*

Source: OP Ghai Essential Pediatrics, 8th edition, pg 212

111. In which age does a child cruise around the furniture?

a. 9 months b. 11 months
c. 13 months d. 15 months

Answers

107.d	Oxytocin	108.a	Colostrum	109.b	Physiological ...
110.b	Exanthem ...	111.b	11 months	112.c	Febrile co
113.a	Premature				

Age	Gross motor	Fine motor	language	Social/Cognitive
2 months	Lifts head/chest when prone	Tracks past midline	Alerts to sound coos	Recognizes parent, social smile
4-5 months	Rolls front to back, back to front (5 months)	Grasps rattle	Orients to voice, begins to make consonant, razzes	Enjoy looking around, laughs
6 months	Sits unassisted	Transfers objects, ranking grasp	Babbles	Stranger anxiety
9-10 months	Crawls, pulls to stand	Uses three fingers (immature) pincer grasp	Says mama/dada (non specific)	Waves bye bye
12	**Cruises** (11 months), walks	Uses two finger (mature)	Says mama/dada (specific)	Imitates action, separa

months	alone	pincer grasp		anxiety
15 months	Walks backward	Uses cup	Uses 4-6 words	Temper tantrums
18 months	Runs, kicks a ball	Builds towers of 2-4 cubes	Names common objects	May start toilet training
2 years	Walks up/down steps with help, jumps	Builds tower of six cubes	Uses two word phrases	Follows two steps commands, removes clothes
3 years	Rides tricycle, climb stairs with alternating feet 3-4 years)	Copies a circle, uses utensils	Uses three word sentences	Brushes teeth with help
4 years	Hops	Copies a square	Knows colors and some numbers	Cooperatively plays
5 years	Skips, walks behind for long distance	Ties shoelaces, knows left and right, prints letters	Uses five word sentences	Domestic role playing, plays dress up

112. A 5 year old child was brought to the EMR with history of GTCS of one episode which lasted less than 5 minutes. The mother gives 1 day history of high grade fever. After seizure the baby was normal in post ictal phase and had no neurological deficit. What is your provisional diagnosis?

a. Status epilepticus
b. Meningitis
c. Febrile convulsion
d. Encephalitis

Febrile convulsions:

- *Age- 6months to 5 years*
- *Absence of infection of CNS in a neurologically normal child*
- *The seizure occurs within 24 hours on the onset of fever and last less than 15 mins and are usually single per febrile episode.*
- *There is no postictal deficit.*
- *The immunization status and lumbar puncture usually differentiates it from meningitis and encephalitis.*
- *Treatment: prompt reduction of temperature, maintainance of airway, breathing and circulation be ensured. In some instances, anticonvulsant may be required.*
- *Prophylaxis: clobazam (0.75-1 mg/kg)*

***Ref:** OP Ghai, Essential Pediatrics, 8th edition, page num 556*

113. Necrotising Enterocolitis is a feature in

a. Premature babies
b. Post dated babies
c. Large for date babies
d. Meconium aspiration syndrome

Necrotising enterocolitis:

- *Often occurs in less than 32 weeks babies*
- *Abdominal distension, apnea, bradycardia,instability of temperature, cyanosis and lethargy*
- *Risk factors: gut immaturity, mucosal injury due to hypoxic ischemia, milk feeding and infection*
- ***Three stages:***
  1. *Suspected NEC: mild abdominal distension and vomiting.*
  2. *Stage 2: bowel sounds diminished. Pneumatosis intestinalis and dilatation of intestines are seen on abdominal xray*
  3. *Stage 3: hemodynamic instability, frank signs of peritonitis with abdominal wall redness, pneumoperitoneum*
- *NPO, NG insertion, IV fluids are the management modalities*

***Ref:** OP Ghai Essential Pediatrics, 8th edition, page 165*

114. What is the feature in congenital adrenal hyperplasia? CAH

a. 5 hydroxylase deficiency
b. 7 hydroxylase deficiency
c. 11 hydroxylase deficiency
d. 21 hydroylase deficiency

Congenital adrenal hyperplasia is commonest adrenal disorder in childhood.

- *Caused by 21 β-hydroxylase deficiency, hyperplasia is caused by excessive secretion of ACTH that results from loss of the negative feedback action of cortisol.*
- *Tissues affected: zona glomerulosa, zona fasciculate, zona reticularis*
- ***Clinical picture:***
  a. *salt wasting form: virilisation and salt wasting, abnormal genital appearance, failure to thrive, polyuria, hypopigmentation and shock.*
  b. *simple virilising form: androgen excess and precocious puberty in boys.*
  c. *non classic form: mild hyperandrogenism with hirsuitsim, acne and menstrual irregularity.*

  Malesare phenotypically normal at birth but develop precocious pseudopuberty, growth acceleration, premature epiphyseal plate closure and diminished final height.
- *Diagnosis: extreme elevation of 17 hydroxyprogesterone*
- *Treatment: hydrocortisone and fludrocortisones*

***Ref:** OP ghai Essential Pediatrics, 8th edition, pg number: 526*
USMLE lecture notes 2019, Physiology

NMCLE ... Entry
110.b Exanthem ... 111.b 11 months 109.b Physiological ...
113.a Premature ... 114.d 21 hydroyla... 112.c Febrile co...
116.c TOF 115.c X linked

115. Which of the following is the correct inheritance pattern in Duchenne Muscular Dystrophy?

a. Autosomal dominant
b. Autosomal recessive
c. X linked recessive
d. Both autosomal recessive and X linked recessive

Examples :

- *Autosomal Dominant: Huntington chorea, connective tissue disorders, Neurofibromatosis, achondroplasia, Marfan Syndrome, Crouzon disease.*
- *Autosomal recessive: beta thalassemia, SCD, Spinal muscular atrophy, Phenylketonuria, Galactosemia*
- *X linked recessive: Hemophilia, DMD, color blindness, Hunter syndrome*
- *X linked dominant: Hypophosphatemic type of Vitamin D resistant rickets, orofaciodigital syndrome and incontinentia pigmenti*

***Ref:** OP Ghai Essential Pediatrics, 8th edition, pg number 641*

116. A 3 year old child was brought to the OPD with complains of failure to thrive, bluish discoloration on and off while crying or feeding since 2 months of age. The baby also has periodic breathing attacks. What is your diagnosis?

a. VSD
b. ASD
c. TOF
d. Breathe holding spells

- *Acyanotic heart disease: ASD, VSD, PDA, Atrioventricular septal defect, Pulmonary valve stenosis, Coarctation of Aorta, coronary artery abnormalities*
- *Cyanotic heart disease: TOF, TAPVC,Transposition of great vessels, Eisenmenger syndrome, Ebstein anamoly, Persistent Truncus Arteriosus*
- *Breathe holding spells: rare before 6 months of age, peak at 2 years and abate by 5 years of age. Provocated by anger, frustrations or pain. Revert on its own in several minutes.*
- *Tetralogy of Fallot:*

Classic tetrad of: *severe right ventricular outflow obstruction, large VSD, overriding aorta and right ventricular hypertrophy.*

C/F:

- *Anoxic spells with cyanosis*
- *Dyspnea on exertion and exercise intolerance relieved by squatting position.*
- *Sometimes LOC and convulsions may develop due to excessive crying.*
- *Ejection systolic murumur with parasternal impulse.*
- *ECG: right axis deviation*
- *X-ray: boot shaped heart (Coeur en Sabot)*
- *Complication of TOF: anemia, Infective Endocarditis, Hemiplegia, brain abscess*

Pentalogy of fallot: TOF +ASD

Trilogy of fallot: Pulmonary valve stenosis, RVH, ASD

***Ref:** Nelson textbook of pediatrics, 20th edition*

117. A child was brought to the EMR with sudden onset of coughing and wheezing was heard on right side with feature suggestive of collapse lung. What is the diagnosis?

a. Pneumonia
b. Bronchiolitis
c. Foreign Body aspiration
d. Bronchiolitis

- *Foreign Body aspiration: localized wheeze with sudden onset coughing, area with diminished air entry.*
- *Bronchiolitis: occurs within 2 years especially by viral infection(RSV). Hyperinflation of chest with scattered areas of infiltration may be seen on CXR.*

***Note:** option b and d were same, but don't get confused.*

***Ref:** OP Ghai Essential Pediatrics, 8th edition, pg number 381*

118. Most common organism causing atypical pneumonia:

a. Mycoplasma
b. Chlamydia
c. Listeria
d. Neisseria

Atypical Pneumonia:

- *Primary atypical pneumonia: Mycoplasma pneumonia.*
- *Uncommon below 4 years of age*
- *Involves interstitial tissue with round cell infiltrates.*
- *IP-12-14 days*
- *Fever, headache dry cough. Hemolytic anemia may be seen*
- *Cold agglutinins are raised*
- *Rx: macrolides or tetracycline for 10-14 days*

***Ref:** OP Ghai essential pediatrics; 8th edition, page number 379*

Answers

107.d	Oxytocin	108.a	Colostrum	109.b	Physiological ...
110.b	Exanthem ...	111.b	11 months	112.c	Febrile co...
113.a	Premature ...	114.d	21 hydroyla...	115.c	X linked ...
116.c	TOF	117.c	Foreign Body...	118.a	Mycoplasma

Obstetrics and Gynaecology

119. Uterus develops from:

a. Mesonephros
b. Wolfian duct
c. Mullerian Duct
d. Gartner's duct

Male and female derivatives of embryonic urogenital structures

Embryonic structure	*Derivatives*	
	Male	*Female*
Labioscrotal swelling	*Scrotum*	*Labia majora*
Urogenital folds	*Ventral aspect of penis*	*Labia minora*
Genital tubercle	*Penis*	*Clitoris*
Urogenital sinus	*Urinary bladder Urethra except navicular fossa Prostate gland*	*Urinary bladder, urethra Urethral and paraurethr glands*

119.c Mullerian Duct

	Prostatic utricle Bulbourethral glands	Vagina Bartholin's glands
Paramesonephric duct	Appendix of testes	Hydatid of Morgagni, uterus, cervix fallopian tubes, vagina (muscular wall)
Mesonephric duct	Ductus epididymis Ductus differents and seminal vesicles	Duct of epoophoron Gartner's duct
Mesonephric tubules	Ductuli efferentes Paradidymis	Epoophron Paroophoron
Undifferentiated gonad	Testis	Ovary
Cortex	Seminiferous tubules	Ovarian follicles
Medulla	Rete testis	Rete ovarii
Gubernaculum	Gubernaculum testis	Ovarian ligament Round ligament
Mullerian tubercle	Seminal colliculus	Hymen

Ref. DC dutta textbook of Gynecology, sixth edition,pg number 39

120. Which of the following is correct about bacterial vaginosis?

a. Sexually transmitted Disease
b. Sexual activity aggravate the disease
c. Oral doxycycline is treatment of choice
d. Trichomonas vaginalis can be isolated.

Bacterial vaginosis:

➲ ***Organism:*** *Gardenerella vaginalis (previously), Prevotella, Mobiluncus, Bacteroids*

Clinically, it is characterized by creamy vaginal discharge with fishy smell without extensive evidence of inflammation.

➲ ***Diagnosis:***

A. Amsel's criteria:

1. *Homogenous vaginal discharge*
2. *Vaginal PH>4.5 (litmus paper test)*
3. *Presence of clue cells*
4. *Positive whiff test (fishy odor when discharge is mixed with 10% KOH solution)*

B. Nugent's criteria: quantification or grading bacteria.

- *Lactobacillus (0-4)*
- *Bacteroides/ Gardnerella (0-4)*
- *Mobiluncus (0-2)*

Scores are interpreted as:

0-3: normal

4-6: intermediate bacterial count

7-10: BV

➲ *Complications: PID, pregnancy complications*

➲ *Although BV is not considered as STDs, sexual activity has been linked to development of the infection. Incidence of BV increases with an increase in number of sexual partners, anew sexual partner may be related to BV, male partners of women with BV have urethral colonization by organism, but the male is asymptomatic.*

➲ ***Treatment:*** *Metronidazole*

Ref: DC Dutta's Textbook of gynecology, 6th edition, Medscape, Up to date

121. Which of the following complication in twin baby is least likely to be dealt with?

a. Preeclampsia
b. Polyhydramnios
c. Preterm labor
d. Chorioamnionitis

Complications of multifetal pregnancy

Maternal	Fetal
• Nausea, Vomiting	• Abortion
• Anemia	• Vanishing twin/fetus papyraceous
• PIH and Preeclampsia	• Appearing twin
• Polyhydramnios/ oilgohydramios	• Preterm birth
• Preterm Labor	• Fetal anomalies
• Mal presentation	• Discordant growth
• Antepartum hemorrhage	• Intrauterine death of one fetus
• Mechanical distress (dyspnea, palpitation)	• Twin transfusion syndrome
• Prolonged labor	• Cord prolapse
• Operative interference	• Locked twins
• Postpartum hemorrhage	• (↑) Perinatal mortality (complications are more in monozygotic twins, p.240)
• (↑) Postnatal support	

➲ *Prematurity tends to increase 80% and preterm labor by 50% than normal pregnancy.*

➲ *Preeclampsia increases by 25%. Exposure to abundance of chorionic villi is the best possible explanation.*

➲ *Malpresentation and Antepartum Hemorrhage (placenta previa) is also very common.*

Ref: DC Duttas textbook of obstetrics, 8th edition pg 238

122. A 13 year old girl visited you in the OPD with the complain of amenorrhea. She says she has periodic pain every month in the abdomen but doesn't pass blood. Her secondary sexual characters are developed. On examination there is bluish swelling over vulval area in between labia. What is your diagnosis?

a. Mullerian agenesis
b. Imperforate hymen
c. Transverse vaginal septum
d. Hypogonadotropic hypogonadism

This is a classic case of cryptomenorrhea:

➲ *Cryptomenorrhea: condition where menstrual blood fails to come out of the genital tract due to obstruction in the passage.*

➲ *Commonest cause is imperforate hymen which is congenital.*

➲ *Pathophysiology: If the site of obstruction is low down in [illegible] blood results in hematocolpos*

119.c Mullerian Duct | 120.b Sexual activ... | 121.d Chorioamni...
122.b Imperforate ... | 123.a Regular foll... | 124.a Monoamnio...

→ hematometra → hematosalpinx. If the obstruction is at the cervix, it will produce hematometra →hematosalpinx. Hematocolpos produces marked elongation of the urethra → retention of urine.

- Clinical feature: Age: 13-15, periodic pain in the abdomen, urinary retention, vulvul examination reveals bulging hymen.
- Treatment: cruciate incision of hymen and drainage of blood, dilatation.
- Causes of primary amenorrhea where secondary sexual characters are normal:
  a. Imperforate hymen
  b. Transverse vaginal septum
  c. Absent vagina and functioning uterus
  d. MRKH syndrome
  e. Resistant ovary syndrome
  f. Constitutional delay

Ref: DC dutta textbook of gynecology, 6th edition, page number 450, Shaw textbook of gynecology, page number 322

123 **A 27 year old P1 lady visited to you in the OPD with the USG report of intramural fibroid of 4×3×1.2 size and asks you for advice. Her menstrual cycle is regular and normal flow. What would you suggest to her?**

a. Regular followup
b. Myomectomy
c. Hysterectomy
d. Gnrh agonist

Asymptomatic fibroid requires no treatment.

124 **In which of the following is vaginal delivery contraindicated?**

a. Monoamnionic monochorionic twin
b. Twin with first vertex and second breech presentation
c. Mentoanterior presentation
d. Previous LSCS

119.c	Mullerian Duct	120.b	Sexual activ...	121.d	Chorioamni...
122.b	Imperforate ...	123.a	Regular foll...	124.a	Monoamnio...
125.a	15 million/ml	126.b	Beta hcg pl...	127.b	Pulmonary ...
128.a	Intravenous ...	129.c	Type II ...	130.b	Hydatidifor...

- The best answer from the given options is a. Monochorionic monoamniotic twins
- Mentoposterior (brow) presentation and transverse lie has no mechanism of labor.
- Given is the list of indications for cesarean section. Please go through it:

Absolute Indications

Vaginal delivery is not possible. Cesarean is needed even with a dead fetus
Indications are few:

- **Central placenta previa**
- **Contracted pelvis or cephalopelvic** disproportion (absolute)
- **Pelvic mass** causing obstruction (cervical or broad ligament fibroid)
- **Advanced carcinoma cervix**
- **Vaginal obstruction** (atresia, stenosis)

Common Indications of Cesarean Section

Primigravidae: (1) Failed indication (2) fetal distress (non-reassuring fetal FHR) (3) Cephalopelvic disproportion (CPD) (4) dystocia (dysfuctional labor p. 359) nonprogress of labor (5) malposition and malpresentation (occipito-posterior, breech).

Multigravidae: (1) Previous cesarean delivery (2) antepartum hemorrhage (placenta previa, placental abruption) (3) malpresentation (breech, transverse lie).

Relative Indications

Vaginal delivery may be possible but risks to the mother and/or baby are high
(More often multiple factors may be responsible)

- **Cephalopelvic disproportion** (relative) see p. 410
- **Previous cesarean delivery** (p. 385)—(a) when primary CS was due to recurrent indication (contracted pelvis). (b) Previous two CS (c) Features of scar dehiscence. (d) Previous classical CS
- **Non-reassuring FHR** (fetal distress)
- **Dystocia** may be due to **(three Ps) relatively** large fetus **(passenger)**, small pelvis **(passage)** or inefficient uterine contractions **(power)**
- **Antepartum hemorrhage:** (a) Placenta previa and (b) abruptio placenta (p. 287, 292, 300)
- **Malpresentation:** Breech, shoulder (transverse lie), brow (p. 434)
- **Failed surgical induction** of labor, **failure to progress** in labor (p. 598)
- **Bad obstetric history**—with recurrent fetal loss
- **Hypertensive disorders:** (a) Severe preeclampsia, (b) eclampsia—uncontrolled fits even with antiseizure therapy (p. 255, 268)
- **Medical-gynecological disorders:** (a) Diabetes (uncontrolled), heart disease (coarctation of aorta, Marfan's syndrome; (b) mechanical obstruction (due to benign or malignant pelvic tumors (carcinoma cervix), or following repair of vesicovaginal fistula

Ref: DC Dutta's textbook of Obstetrics, 8th edition, page number 670

	Imperforate ...	123.a	Regular foll...	124.a	Monoamnio...
125.a	15 million/ml	126.b	Beta hcg pl...	127.b	Pulmonary ...
128.a	Intravenous ...	129.c	Type II ...	130.b	Hydatidifor...

125. A couple came to the infertility clinic with complain of not being able to conceive even after unprotected sex for more than a year. The doctor has asked for sperm analysis. What is the minimum concentration of sperm needed to fertilize the ovum in naturally occurring pregnancy?

a. 15 million/ml
b. 20 million /ml
c. 30 million/ml
d. 40 million/ml

Semen analysis	*Normal reference value and lower reference (within parenthesis) limit*
Volume	*2.0mL or more (1.5mL)*
pH	*7.2-7.8*
Viscosity	*<3 (scale 0-4)*
Sperm concentration	*20 million/mL (15 million/mL)*
Total sperm count	*> 40 million/ejaculate (39 million/ejaculate)*
Motility	*>50% progressive forward motility (Progressive motility = 32%)*
Morphology	*>14% normal form (4%)*
Viability	*75% or more living (58%)*
Leucocytes	*Less than 1 million/mL*
Round cells	*<5 million/mL*
Sperm agglutination	*<10% spermatozoa with adherent particles*

Nomenclature

- ***Aspermia:*** *Failure of emission of semen (no ejaculate).*
- ***Oligospermal/Oligozoospermia:*** *Sperm count is less than 20 million per mL.*
- ***Polyzoospermia:*** *Count is more than 350 million/mL.*
- ***Azoospermia:*** *No spermatozoan in the semen.*
- ***Asthenozoospermia:*** *Reduced sperm motility.*

Leucocytospermia: Increased white cells in semen.

- ***Necrozoospermia:*** *Spermatozoa are dead or motionless.*
- ***Teratozoospermia:*** *>70% spermatozoa with abnormal morphology.*
- ***Oligoasthenoteratozoospermia:*** *Disturbance of all 3 varibles*

126. How do you diagnose gestational trophoblastic neoplasm after post molar evacuation?

a. Presence of theca lutean cyst
b. Beta hcg plateaus over weeks
c. PV examination shows grape like vesicles
d. Stoppage of bleeding after evacuation

Classification of GTN

1. ***Molar pregnancy(benign)***
   a. *Complete*
   b. *Partial*
2. ***Persistent or residual mole***
   a. *Invasive*
   b. *Placental site*
3. ***Choriocarcinoma***
   a. *Non-metastatic*
   b. *Metastatic: lungs, liver, brain*

Diagnostic criteria of post molar GTN:

Levels of serum B HCG are followed up:

1. *≥ four values of plateaued hcG (10%) over at least 3 weeks time.*
2. *A rise of hcG of > 10% for > 3 values over at least 2 weeks time.*
3. *Histologic diagnosis of choriocarcinoma.*
4. *Persistence of hcG beyond 6 months of mole*

Ref: *Shaw textbook of Gynecology, page number 318*

127. A 50 year old lady who had undergone vaginal hysterectomy developed sudden onset of breathelessness and acute chest pain on her 3rd postop day in the ward. The saturation has dropped to 70%. What is your diagnosis?

a. DVT
b. Pulmonary embolism
c. pneumonia
d. wound sepsis

128. 33 weeks primigravida presented to obstetric OPD with BP 140/100 mmHg and bilateral swelling of legs. On laboratory examination, albumin was 3+. Suddenly she developed abnormal body movement. Diagnosis of eclampsia was made. What is the standard drug regimen for this condition?

a. Intravenous $MgSO_4$ 4gm loading dose followed by 10 gm Intramuscular in each buttock followed by 5gm each in alternate buttock
b. Intravenous $MgSO_4$ 5gm loading dose followed by 10 gm Intramuscular in each buttock followed by 5gm each in alternate buttock
c. Intravenous $MgSO_4$ 4gm loading dose followed by 5 gm Intramuscular in each buttock followed by 5gm each in alternate buttock
d. Intravenous $MgSO_4$ 5gm loading dose followed by 5 gm Intramuscular in each buttock followed by 5gm each in alternate buttock

Regimens of $MgSO_4$ for the management of severe preeclampsia and eclampsia

Regimen	***Loading Dose***	***Maintenance Dose***
Intramuscular (Pritchard)	*4g (20% solution) IV over 3-5 minute followed by 10g buttock (50%), deep IM (5gm in each buttock)*	*5g (50%) IM 4 hourly in alternate*
Intravenous (zuspan or Sibai)	*4-6g IV slow over 1-2 g/h IV infusion 15-20 minute*	

	Imperforate ...	123.a	Regular foll...	124.a	Monoamnio...
125.a	15 million/ml	126.b	Beta hcg pl...	127.b	Pulmonary ...
128.a	Intravenous ...	129.c	Type II ...	130.b	Hydatidifor...

129. Which is known as dangerous placenta previa?

a. Type I
b. Type II anterior
c. Type II posterior
d. Type III

➲ ***Dengerous placenta previa*** *is the name given to the type-II posterior placenta previa. (1) Because of the curve birth canal major thickness of the placenta (about 2.5 cm) overlies the sacral promontory, thereby diminishing the anteroposterior diameter of the i9nlet and prevents engagement of the presenting part. This hinders effective compression of the separated placenta to stop bleeding. (2) Placenta is more likely to be compressed, if vaginal delivery is allowed. (3) More chance of cord compression or cord prolapse. The last two may produce fetal anoxia or even death.*

Ref. DC duttas's textbook of obstetrics, 8th edition, page number 284

130. A 25 years Primi presented with history of lower abdominal pain, Per vaginal bleeding and amenorrhea for past 6 weeks. USG abdomen shows snow storm appearance. Most likely diagnosis is:

a. Choriocarcinoma
b. Hydatidiform mole
c. Adenomyosis
d. Endometriosis

Answers

119.c	Mullerian Duct	120.b	Sexual activ...	121.d	Chorioamni...		
122.b	Imperforate ...	123.a	Regular foll...	124.a	Monoamnio...		
125.a	15 million/ml	126.b	Beta hcg pl...	127.b	Pulmonary ...		
128.a	Intravenous ...	129.c	Type II ...	130.b	Hydatidifor...		

Comprehensive Structured Questions

A. A 30yrs old male patient presented with fever, pain and swelling over left knee joint for last 10 days with restriction of movement. On examination patient was ill looking and dehydrated. Joint aspiration was done and final diagnosis of Septic Arthritis was made.

131. If the organism isolated in synovial aspiration was Staphylococcus aureus, what will be the drug of choice?

a. Ceftazidime
b. Cloxacillin
c. Carbenicillin
d. Ciprofloxacin

132. What is the mechanism of action of above DOC?

a. Inhibition of N- acetyl glucuronic acid
b. Inhibition of N-acetyl muramic acid
c. Binding to specific PBPs
d. β lactamase producer

133. If the organism has resistance against above DOC it is called?

a. β lactamase resistant
b. Extended spectrum β lactam resistant
c. Methicillin resistant
d. Penicillin resistant

134. Which is the drug of choice for above mentioned resistance:

a. Piperacillin
b. Vancomycin
c. Tazobactam
d. Meropenem

135. Which specific feature above mentioned drug has to overcome the resistance:

a. Higher efficacy
b. Inhibition of transpeptidase enzyme
c. Cumulative effect of inhibition at multiple levels
d. Longer duration of action

Cloxacillin

➲ *Belongs to Penicillinase resistant Penicillins group of β lactams*

➲ ***MOA:*** *Inhibition of bacterial cell wall synthesis by binding to specific penicillin binding proteins(PBPs)*

Superior to Penicillin V which are just acid resistant, Cloxacillin is both acid and penicillinase resistant.

➲ *DOC for Staphylococcus aureus.*

➲ *Staphs which are resistant to Penicillinase and other β lactams are k/a MRSA(Methicillin resistant Staphylococcus aureus)*

➲ *DOC for MRSA is Vancomycin/Linezolid*

Vancomycin

➲ *Belongs to Glycopeptide group*

➲ *Vancomycin acts by inhibiting bacterial cell wall synthesis. It binds to the terminal dipeptide 'D-ala-D-ala' sequence of peptidoglycan units prevents its release from the bactoprenol lipid carrier so that assembly of the units at the cell membrane and their cross linking to form the cell wall cannot take place.*

131.b	Cloxacillin	132.c	Binding to ...	133.c	Methicillin ...
134.b	Vancomycin	135.b	Inhibition of ...	136.b	Ascending
137.b	Chlamydia t...	138.a	Infertility	139.c	Oral Doxy...

B. A 24 years female suffering from fever, abdominal pain and mucoid discharge from vagina since 5 days came to your OPD. On examination, cervical motion tenderness was present. The provisional diagnosis Pelvic Inflammatory Disease (PID) was made.

136. Most common route of infection of PID is

a. Hematogenous
b. Ascending
c. Lymphatic
d. Descending

137. Most common causative organism is

a. E. coli

131.b	Cloxacillin	132.c	Binding to ...	133.c	Methicillin ...
134.b	Vancomycin	135.b	Inhibition of ...	136.b	Ascending
137.b	Chlamydia t...	138.a	Infertility	139.c	Oral Doxy...

b. Chlamydia trachomatis
c. Staphylococcus aureus
d. Candida

- *Acute PID is a polymicrobial infection.*
- *Primary organisms are sexually transmitted: Niesseria gonorrhoeae (30%), Chlamydiae trachomatis (30%) and mycoplasma hominis (10%)*
- *Secondary organisms are normally found in vagina:*
- *Aerobic: nonhemolytic Streptococcus, E.coli, Staphylococcus*
- *Anaerobic: Bacteroides species- fragilis and bivius, Peptostreptococcus and Peptococcus.*

138. Late complication of PID is

a. Infertility
b. Endometriosis
c. Adenomyosis
d. Uterine prolapsed

Complications of PID:immediate

- *pelvic peritonitis or even generalized peritonitis*
- *septicemia: producing arthritis or myocarditis*

Late complications of PID

- *dyspareunia*
- *infertility rate is 12%, increases upto 25% after 2 episodes and upto 50% after 3 episodes*
- *inceased risk of ectopic pregnancy (6-10 folds)*
- *chronic pelvic inflammation*
- *adhesions*
- *chronic pelvic pain*

12 25 50%

139. Best line of treatment is

a. Vaginal douching for 2 weeks
b. Anti microbial ring pessary
c. Oral Doxycycline for 2 weeks
d. TAH with BSO

- *Outpatient treatment of PID (CDC-2010B)*
- *Ceftriaxone 250 mg im single dose*
- *Doxycycline 100 mg PO BD for 14 days with or without*
- *Metronidazole 500 mg PO BD for 14 days*

140. Indication for parenteral treatment is

a. Recurrent PID
b. WBC>15000
c. Purulent discharge
d. Fever>38°C

Indications for hospitaliztion (CDC-2006)

- *Suspected tubo-ovarian abscess*
- *Severe illness, vomiting, temperature > 38°C*
- *Uncertain diagnosis-where surgical emergencies, (eg: appendicitis) cannot be excluded*
- *Unresponsive to outpatient therapy for 48 hours*
- *Intolerance to oral antibiotics*
- *Co-existing pregnancy*
- *Patient is known to have HIV infection*

Source: *DC Dutta's textbook of Gynecology 6th edition chapter pelvic Infections*

C. A 30 weeks primigravidae comes to your OPD. Her pregnancy was confirmed by USG at 9 weeks. On examination at present, Single live fetus with the fetal head felt at RUQ and fetal back was directed towards left of the mother. The baby was lying such that both his hips were flexed and both knees extended. Currently the mother is not in labour.

141. Which type of breech is present?

a. Complete breech
b. Frank breech
c. Incomplete breech
d. Double footling

Types of breech:

- *Complete/ flexed: breech with both flexion of thigh at hips and flexion of legs knee*
- *Incomplete breech: breech with varying degrees of extension of thighs or legs at podalic pole*

Breech with extended legs/ Frank Breech: thigh flexed and legs extended at knee

Footling presentation: both thighs and legs are partially extended bringing legs to present at brim

Knee presentation: thighs are extended but knees are flexed bringing knees down to present at brim.

142. Which of the following describes the lie of the baby?

a. Unstable lie
b. Normal lie with normal presentation
c. Normal lie with abnormal presentation
d. Abnormal lie with abnormal presentation

- ***Lie:*** *refers to the relationship of long axis of fetus to long axis of centralized uterus or maternal spine. Most common lie: longitudinal (99.5%). Other lie may be transverse or oblique or unstable lie.*
- ***Presentation:*** *the part of fetus which occupies the lower pole of uterus (pelvic brim). It may be cephalic (96.5%), podalic (3%) or shoulder and others (0.5%)*
- *In this case, lie is longitudinal and presentation is podalic. Hence, normal lie with abnormal presentation is correct.*

143. Percentage of occurrence of breech at 30 weeks is

a. 3%
b. 11%
c. 17%
d. 25%

Incidence of breech:

- *At 28th week: 20%*
- *At 30th week:11%*
- *At 34th week: 5%*
- *At term: 3-4%*

140.d	Fever>38°C	141.b	Frank breech	142.c	Normal lie ...
143.b	11%	144.b	USG for plac...	145.c	Expectant ...
146.d	Grave's di...				

CLE Easy Entry

PID outpatient basis.

QUESTION

CEFTRIAXONE :- 250mg stat.

DOXYCYCLINE :- 100mg BD 14days.

METRONIDAZOLE :- 500mg BD 14days

ANSWER

143.b	11%	144.b	USG for plac...	145.c	Expectant ...
146.d	Grave's di...	147.a	Adrenergic ...	148.a	To see the ...
149.b	15-20gm of ...	150.a	Surgery is ...	151.c	Severe de...

144. What is the management plan for this case now?

a. BPP monitoring to know the condition of fetus
b. USG for placentation or anomalies if present
c. MRI
d. Trans Vaginal sonography

145. What is the definitive management for this case?

a. CS as this is the case of breech in primigravidae
b. External Cephalic Version
c. Expectant management as the breech can go into spontaneous rectification
d. Misoprostol for induction as the patient is not in labour

- *This is the case of breech presentation at 30th week. The incidence of breech at term decreases up to 3% from 20% at 28th week. Hence spontaneous rectification occurs in maximum of cases. So the answer is expectant management.*
- *The case of primi breech at term is managed by CS.*
- *ECV can be considered from 36 week onwards but success rate is about 65%.*

Causes of failure of ECV:

- *Breech with extended legs (as in this case)*
- *Scanty liquor*
- *Big baby*
- *Short cord*

Uterine malformations

D. A 34 years female presented with a mass felt in right side of neck along with weight loss, heat intolerance, palpitation, excessive sweating and exopthalmus. On USG of neck there was about 4×3×1 cm mass present over right neck.

146. What is the likely diagnosis?

a. Toxic nodule
b. Toxic nodular goitre
c. Endemic goitre
d. Grave's disease

- *This question is quite confusing considering the condition given above. Looking only the symptoms, feature of Exophthalmos readily inclines the diagnosis towards Grave's disease as Ophthalmopathy associated with hyperthyroidism is seen exclusively in Grave's disease. Period. But USG showing a discrete mass contradicts the fact that in Grave's disease there is diffuse enlargement of thyroid. So good luck with the answer!!*

147. Besides the action of thyroxine, these symptoms are likely due to

a. Adrenergic action
b. Proteolysis
b. Parasympathetic stimulation
d. None

- *Adrenergic hormones are responsible for Fight and flight response during which the BMR of the body is increased due to sympathetic simulation that mimics the condition similar to Thyrotoxicosis*

148. Thyroid scan is done to

a. To see the uptake of radio isotopes by thyroid tissue
b. To differentiate benign or malignant lesion
c. For deciding medical or surgical management
d. none

Thyroid Scan(Tc^{99m} scintigraphy) Indications

- *First and foremost is to study the uptake of radioactive iodine by thyroid tissues*
- *Lumps, nodules (cysts), or other growths*
- *Inflammation or swelling*
- *An overactive thyroid, or hyperthyroidism*
- *An underactive thyroid, or hypothyroidism*
- *Goiter, which is an abnormal enlargement of the thyroid*
- *Thyroid cancer*

149. Which of the following statement is FALSE?

a. Patient should be admitted for 24 hours to make her Euthyroid
b. 15-20gm of thyroid tissue is preserved in B/L lobe during Subtotal thyroidectomy
c. there is high chance of removal of parathyroid gland during surgery
d. none

Types of Thyroid Surgery

1. *Lobectomy or Hemi-thyroidectomy: Complete removal of one thyroid lobe with isthmus*
2. *Subtotal thyroidectomy: Removal of more than one half of thyroid lobe on each side and also isthmus leaving 3gm on each side.*
3. *Near total thyroidectomy: Removal of complete thyroid lobe on one side along with isthmus and complete removal of lobe on other side leaving only a small part (1gm) of it to protect parathyroid and recurrent laryngeal nerve*
4. *Total thyroidectomy: Complete removal of both lobes and isthmus.*
5. *Isthmusectomy: Complete removal of isthmus*

Complications of Thyroid surgery

1. *Hematoma*
2. *Airway Obstruction*
3. *Injury to recurrent laryngeal nerve*
4. *Injury to superficial laryngeal nerve*
5. *Wound infection*

149.b	15-20gm of ...	150.a	Surgery is ...	151.c	Severe de...
152.b	0.9% NaCl at ...	153.b	Pulmonary ...	154.b	Frusemide ...

6. *Hypocalcemia(d/t Parathyroidectomy)*
7. *Pneumothorax*
8. *Hypothyroidism*

150. Which of the following statement is TRUE?

a. Surgery is the best method of treatment
b. Radioisotope iodine decreases the functional thyroid tissue
c. Anti-thyroid drugs completely cures the disease
d. After surgery Carbimazole is given to prevent relapse

Principle of management of Thyrotoxicosis

1. ***Antithyroid drugs(Carbimazole, Propiothiouracil)***

Usually indicated in patients less than 40years

Usually started in high doses, until patient is rendered euthyroid by 6-8 weeks

Once Euthyroid is established, the dose is gradually titrated according to serum level of TSH and T4

But antithyroid treatment has high chance of relapse

2. ***Radioactive Iodine(I^{131})***

Indicated in patients more than 40 years

It acts by inhibiting the synthesis and release of thyroxine(Wolff-Chaikoff effect)

***Transient effect**: Lasts only for about 10 days. So, patients under Radioactive iodine should be operated within 10-14 days otherwise results in relapse of thyrotoxicosis*

3. ***Thyroid Surgery***

Treatment of choice if patients with thyrotoxicosis

Surgery of choice is Subtotal thyroidectomy.

Patient should be rendered Euthyroid prior to surgery

Following Surgery, patient is continued on Levothyroxine to prevent hypothyroidism.

***References**: Davidson's principle and practice of Medicine 23rd edition, Page no 644*

Diseases of Ear, Nose and Throat, PL Dhingra 6th Edition Page no 336

E. A 18 month old female child was brought to the ER. The mother says she has become very drowsy and is unable to feed since two days. Today morning she was not able to arouse the baby even on the painful stimuli. The mother is in panic regarding the baby condition. On examination the baby has sunken eyes and skin pinch tends to be normal very slowly.

151. What is your diagnosis?

a. Mild dehydration
b. Moderate dehydration
c. Severe dehydration
d. No dehydration

Assessment of dehydration in patients with diarrhea

Look at			
Condition[1]	*Well alert*	*Restless, irritable*	*Lethargic or unconscious; floppy*
Eyes[2]	*Normal*	*Sunken*	*Very sunken and dry*
Tears	*Present*	*Absent*	*Absent*
Mouth and tongue[3]	*Moist*	*Dry*	*Very dry*
Thirst	*Drinks normally; not thirsty*	*Thirsty, drinks eagerly*	*'Drinks poorly' or is not able to drink*
Feel			
Skin pinch[4]	*Goes back quickly*	*Goes back slowly*	*Goes back very slowly*
Decide	*The patient has no signs of dehydration*	*If the patient has two or more signs, there is some dehydration*	*If the patient has two or more signs, there is severe dehydration*
Treat	*Use treatment **Plan A***	*Weigh the patient, if possible, and use treatment **Plan B***	*Weigh the patient and use treatment **Plan C** urgentlyt*

[1]A lethargic child is not simply asleep; the child cannot be fully awakened; has a dull mental state and the child may appear to be drifting into unconsciousness.

[2]In some infants and children the eyes normally appear somewhat sunken. It is helpful to ask the mother if the child's eyes are normal or more sunken than usual.

[3]Dryness of the mouth and tongue can also be palpated with a clean finger. The mouth may be dry in a child who habitually breathes through the mouth. The mouth may be wet in a dehydrated child owing to recent vomiting or dringking.

[4]The skin pinch is less useful in infants or children with marasmus (severe wasting), kwashiorkor (severe malnutrition with edema) and in obese children

152. What is the accurate fluid management in this case?

149.b	15-20gm of ...	150.a	Surgery is ...	151.c	Severe de...
152.b	0.9% NaCl at ...	153.b	Pulmonary ...	154.b	Frusemide ...

a. 0.9% NaCl at the rate of 30 ml/kg in 1 hour followed by 70 ml/kg in 5 hrs
b. 0.9% NaCl at the rate of 30 ml/kg in 1/2 hour followed by 70 ml/kg in 2 and 1/2 hrs
c. 0.9% NaCl at the rate of 20 ml/kg in 1 hour followed by 80 ml/kg in 5 hrs
d. 0.9% NaCl at the rate of 20 ml/kg in 1/2 hour followed by 80 ml/kg in 2 and 1/2 hrs

➲ *A total of 100 ml/kg of fluid(RL with 5% dextrose) is given according to the table below. ORS should be given if the child can take orally.*

➲ *Reassessment every 15-30 mins for pulse and hydration status.*

Age	*30ml/kg*	*70ml/kg*
<12 mo	*1hr**	*5hr*
> 12 mo	*30 min**	*2 ½ hr*

153. **The baby was administered with the above mentioned fluid very rapidly and suddenly she developed dyspnoea with decreased oxygen saturation and the heart rate was around 160 beats per minute with rise in blood pressure. On auscultations, fine crackles were bilaterally present and emergency xray was done which revealed bat wing appearance. What could be the possible underlying pathology?**

a. Pulmonary hypertension due to fluid overload
b. Pulmonary edema due to aggressive fluid replacement therapy
c. Cardiogenic shock due to pulmonary edema
d. Heart failure due to volume overload

➲ *The features are suggestive of pulmonary edema due to aggressive fluid replacement therapy.*

154. **What is your further management plan?**

a. Frusemide 1 mg/kg
b. Frusemide 4mg/kg
c. Mannitol 100mg/kg
d. Mannitol 200mg/kg

➲ *In acute pulmonary edema, frusemide is the best drug of choice in the dose 2-4 ml/kg.*

Answer

131.b	Cloxacillin	132.c	Binding to ...	133.c	Methicillin ...
134.b	Vancomycin	135.b	Inhibition of ...	136.b	Ascending
137.b	Chlamydia t...	138.a	Infertility	139.c	Oral Doxy...
140.d	Fever>38°C	141.b	Frank breech	142.c	Normal lie ...
143.b	11%	144.b	USG for plac...	145.c	Expectant ...
146.d	Grave's di...	147.a	Adrenergic ...	148.a	To see the ...
149.b	15-20gm of ...	150.a	Surgery is ...	151.c	Severe de...
152.b	0.9% NaCl at ...	153.b	Pulmonary ...	154.b	Frusemide ...

155. **What is the concentration of potassium in ORS solution?**

a. 20 mmol/L
b. 30 mmol/L
c. 65 mmol/L
d. 75 mmol/L

Composition of WHO recommended ORS

Constituent	*g/f*	*Osmole or ion*	*mmol/l*
Sodium chloride	*2.6*	*Sodium*	*75*
Glucose, anhydrous	*13.5*	*Chloride3*	*65*
Potassium chloride	*1.5*	*Glucose, anhydrous*	*75*
Trisodium citrate, dihydrate	*2.9*	*Potassium*	*20*
		Citrate	*10*
Total osmolarity			*245*

***Source:** OP Ghai Essential pediatrics, 8th edition*

F. A 12 year old child complains of cola colored urine since three days. There is no history of fever, dyspnea and swelling of body or any trauma.

156. **What is your provisional diagnosis?**

a. Nephrotic syndrome
b. UTI
c. Glomerulonephritis
d. Lupus nephritis

Causes of red urine:

➲ *Factitious hematuria: ingested food, medications, dyes, hemoglobinuria, myoglobinuria in rhabdomyolysis*
➲ *Glomerular: PSGN, IgA nephropathy, MPGN,HUS, Alport syndrome*
➲ *Tubulointerstitial: Interstitial nephritis, pyelonephritis, SCD, Wilms tumor,urinary tract obstruction*
➲ *Lower urinary tract: inflammation, Injury, hypercalciuria*

The question gives idea of acute glomerulonephritis.

157. **What is the next investigation you would like to send?**

a. ASO titre
b. Urine RE/ME
c. Urine C/S
d. ANA

➲ *Acute glomerulonephritis is usually caused due to poststreptococcal infection. History regarding skin lesions, throat infections must be ruled out.*
➲ *PSGN streptococcal strains: type 4 and 12 causes pharyngitis*
➲ *Type 49 causes skin infection*
➲ *ASO titer in acute glomerulonephritis is increased in 80% of cases.*
➲ *Other important laboratory findings:*
Raised ESR
Low C3

158. **The child was in ER with his mother. Suddenly there was tonic clonic seizure developed all over his body. What is the underlying pathology?**

a. Status epilepticus
b. Cardioembolic phenomenon
c. Hypertensive encephalopathy
d. Coagulopathy

➲ *In nephritic syndrome, hypertension and hypertensive encephalopathy may occur leading to seizure.*

159. **The child was immediately taken to the PICU and planned for controlled IV fluid administration with IV loading dose of anti-epilectic medication. In PICU, it was observed that the IV canula on his forearm was blocked. By that time the nurses in PICU did capillary blood glucose level which was found to be 40mg/dl. How do you proceed?**

a. Re-open other IV line and give IV fluids as ordered.
b. Give 2ml/kg of 10% dextrose bolus
c. Send for venous blood glucose analysis
d. Wait for another one hour and observe.

160. **The child was admitted in the pediatric ward for further workup and treatment. The preliminary reports were obtained where hyponatremia was seen. It is due to:**

155.a	20 mmol/L	156.c	Glomerulone...	157.a	ASO titre	158.c	Hypertensiv...
						159.b	Give 2ml/kg ...

160.d Impaired ... 161.a Xray 163.a Early met... 162.a Cortical ...

a. Iv fluid overload
b. Dilutional hyponatremia
c. SIADH
d. Impaired renal function

G. 12 years male complains of pain and swelling over left lower thigh, pain more during nights for 6months. Provisional diagnosis of osteosarcoma was made.

161. What will be your next step?

a. Xray b. USG
c. CT-scan d. MRI

162. What finding will not be seen in X-ray?

a. Cortical thinning
b. Cortical destruction
c. Codmann's Triangle
d. Periosteal new bone formation

X-ray finding in osteosarcoma:
- *Medullary and cortical bone destruction*
- *Permeative or moth-eaten appearance*
- *Periosteal new bone formation*
- *Sunburst appearance*
- *Codmann's triangle*

163. Why is the prognosis of this disease not good?

a. Early metastasis to lung
b. Radio-resistant
c. At presentation it is poorly differentiated
d. Cannot be removed completely after surgery

- *It is the most common tumor to metastasize to lungs.*
- *During its presentation 80-90% patients has micro metastasis.*
- *It is radio-resistant.*

***Source:** Miller's review of Orthopaedics*

164. Which of the following chemotherapy is not given?

a. Cisplatin b. Doxorubicin
c. Bleomycin d. Ifosfamide

- *Chemotherapy agents for bone sarcomas:*
- *Doxorubicin, Cisplatin, Methotrexate*
- *Ifosfamide, Vincristine, Cyclophosphamide, Etoposide*

***Source:** Miller's review of Orthopaedics*

165. Which of the following is not a risk factor?

a. Osteomyelitis
b. Irradiation
c. Paget's disease of bone
d. Male gender

164.c Bleomycin
165.a osteomyelitis
166.b Acute Iritis
167.a Ankylosing ...

Chronic osteomyelitis causes chronic discharging sinus which can lead to sinus tract malignancy.

Most commons:
- *Most common bone tumor: Secondaries*
- *Most common true bone tumor: Osteoid osteoma*
- *Most common malignant bone tumor: Metastasis*
- *Most common primary malignant bone tumor: Multiple myeloma > Osteosarcoma*
- *Most common primary bone tumor causing metastasis to lung: Osteosarcoma> Ewing's*
- *Most common radiation induced sarcoma: Osteosarcoma*

Classical radiological features:
- *Sun-ray appearance: Osteosarcoma*
- *Codman's triangle: Osteosarcoma*
- *Onion peel appearance: Ewing's sarcoma*
- *Soap bubble appearance: Osteoclastoma*
- *Ground glass appearance: fibrous dysplasia*
- *Patchy calcification: Chondrogenic tumors*
- *Homogenous calcification: Osteogenic tumors*

Important ages:
- *1st decade: Ewing's sarcoma*
- *2nd decade: Osteosarcoma*
- *After skeletal maturity: GCT*
- *Epiphyseal before skeletal maturity: Chondroblastoma*
- *After 40: Metastasis, Multiple myeloma*

H. A 25years old male presented with complains of redness and pain in eyes associated with gradual diminution of vision. He had similar episode 6 months back.

166. Most likely diagnosis is:

a. Recurrent Corneal Ulcer
b. Acute Iritis
c. Acute bacterial Conjunctivitis
d. Acute congestive glaucoma

167. Now he complains of pain in the buttocks, left knee joint and right elbow for 1 month. On examination the joints are erythematous but no restriction of movement There is no history of fever and any other complains. Most likely diagnosis is:

a. Ankylosing Spondylitis
b. Rheumatoid Arthritis
c. Behcet's disease
d. Psoriatic Arthritis

168. Which investigation confirms the diagnosis?

a. HLA DR3 b. HLA B51

c. HLA B27 d. Anti- CCP

169. Now he also complains of abdominal pain and bloody diarrhea for past 6 months. Most likely cause is:

a. Irritable Bowel Syndrome
b. Celiac Disease
c. Inflammatory bowel disease
d. Intestinal tuberculosis

170. What is the treatment for this condition?

a. Anti-tubercular therapy
b. Sulfasalazine
c. Steroids
d. NSAIDs

Ankylosing Spondylitis (Marie Strumpell Disease)

- *Generalised chronic inflammatory disorder characterized by progressive inflammatory stiffening of joints with a predilection with joints of axial skeleton specially sacroiliac joint.*
- *M:F= 2:1 to 10:1*
- *HLA-B27 association*

Clinical Features

- *Young adult male presenting with gradual onset pain and stiffness of lower back, stiffness worsened by rest and relieved by activity*
- *Little flattening of lower back and decreased extension of lumbar spine in early stages.*
- *Loss of lumbar lordosis, Increased thoracic kyphosis, loss of cervical extension(Restrict line of vision)*
- *Decreased chest expansion*
- *Peripheral joints(Shoulder, hips and knee mostly affected)*

Extra-articular features of axial spondyloarthritis and ankylosing spondylitis

- *Fatigue, anaemia*
- *Anterior uveitis (25%)*
- *Prostatitis (80% of men) and sterile urethritis*
- *Inflammatory bowel disease (up to 50% have IBD lesions)*
- *Osteoporosis*
- *Cardiovascular disease (aortic valve disease 20%)*
- *Amyloidosis (rare)*
- *Atypical upper lobe pulmonary fibrosis (very rare)*

Radiological Findings

- *Cardinal Features: Erosion and Fuzziness of Sacro-iliac joint(Earliest), Periarticular Sclerosis(Later),and finally Bony ankylosis*
- *Vertebral Changes:*

  Earliest: 'Squaring' d/t flattening of normal anterior concavity of vertebral body.

  Later syndesmophytes

  Bamboo spine(Multiple symmetrical syndesmophytes at several levels)

  Dagger sign: Central radiodense line in frontal radiograph due to ossification of supraspinous and interspinous ligament.

Treatment

For Ankylosing spondylitis: Encourage to remain active

Physiotherapy

NSAIDS: Indomethacin

For IBD associated with Ankylosing spondylitis

- *Ankylosing spondylitis is mostly associated with Crohn's disease.*
- *The above given history of bloody diarrhea further inclines the diagnosis towards Crohn's dz as there is less chance of bloody diarrhea in Ulcerative colitis.*
- *DOC for Crohn's disease is steroids.*

  Budesonide 9mg OD for 6 weeks with gradual reduction in dose for next 2 weeks.

  If no response, switched to oral Prednisolone 40mg daily reducing by 5mg/week over next 8 weeks.

Ref: *Davidson's Principle and Practice of Medicine 23rd edition page no 820, 1030*

I. A 40 year male patient presented with swelling of bilateral lower limbs for a week which gradually progressed upwards and difficulty in breathing mainly on lying supine. On examination he had edema extending to thigh, periorbital edema, engorged neck veins, hepatomegaly.

171. Most common predictive factor for CCF?

a. Raised JVP b. S3 gallop
c. Hepatomegaly d. Edema

172. The mechanism of heart failure can be all of the following except:

a. Increased ventricular contractility
b. Increased ventricular volume
c. Arrhythmia
d. Diastolic dysfunction

173. All of the following are the causes of systolic dysfunction except:

a. Diabetes b. Hypertension
c. Aortic stenosis d. Arrhythmia

174. For the treatment the threshold ejection fraction would be:

a. EF ⇐ 30% b. EF ⇐ 40%
c. EF ⇐ 50% d. EF ⇐ 60%

173.a	Diabetes	174.b	EF ⇐ 40%	175.b	Decreased renin
176.c	Rapidly ...	177.c	Needle pun...	178.a	Tube thorac...
179.b	Safety tria...	180.a	Rupture of subpleural blebs		

175. The most appropriate factor for predicting mortality in a CCF patient will be:

a. Hypernatremia b. Decreased renin
c. Hypotension d. Edema

Causes of heart failure

- *Reduced ventricular contractility: MI, Myocarditis/ cardiomyopathy*
- *Ventricular outflow obstruction (pressure overload): Hypertension, Aortic stenosis (left heart failulure); Pulmonary hypertension, Pulmonary valve stenosis (right heart failure)*
- *Ventricular inflow obstruction: Mitral stenosis, tricuspid stenosis*
- *Ventricular volume overload: VSD, Right ventricular volume overload (eg ASD), increased metabolic demand (high output)*
- *Arrhythmia: Atrial fibrillation, tachycardia cardiomyopathy, complete heart block*
- *Diastolic dysfunction: Constrictive pericarditis, restrictive cardiomyopathy, left ventricular hypertrophy and fibrosis, cardiac tamponade*

Left sided failure	*Failure of either side*	*Right sided failure*
Tachypnea	*Cardiac enlargement*	*Hepatomegaly*
Tachycardia	*Gallop rhythm (S3)*	*Facial edema*
Cough	*Peripheral cyanosis*	*Jugular venous*
Wheezing	*Small volume pulse*	*engorgement*
Rales in chest	*Lack of weight gain*	*Pedal edema*

- *Shock is one of the most important factor in determining the morbidity and mortality of CCF patients.*
- *The treatment should ensure the ejection fraction of minimum 40%.*

J. A young adolescent male presented with sudden onset breathlessness. On examination he was hypotensive and tachycardic. On chest examination, treachea was shifted to left, hyperresonant lung fields and decreased breath sounds on right side was found.

176. Which of the following separates tension pneumothorax from open pneumothorax

a. Tracheal deviation
b. Hyperresonant lung field
c. Rapidly progressing dyspnea
d. Chest pain

177. What will be the immediate management?

a. Chest X-Ray to Confirm diagnosis
b. Give oxygen
c. Needle puncture at 2nd ICS on Mid clavicular line
d. Conservative management with antibiotics

178. What will be the next step?

a. Tube thoracostomy under water seal drainage
b. Chest Xray
c. Give oxygen
d. Observe

179. What is the most appropriate site for chest tube insertion?

a. At the back below tip of scapula
b. Safety triangle at Mid axillary line
c. 2nd Inter-costal space at Mid clavicular line
d. Intercostal space above nipple

180. What is the most likely cause?

a. Rupture of subpleural blebs b. Tuberculosis
c. Pulmonary Infarction d. Pneumonia

Pneumothorax

- *Excessive accumulation of air in the pleural cavity*

Types

A. Spontaneous

1. Primary pneumothorax

Usually occurs in patient with no underlying lung disease.

Mostly occurs due to rupture of subpleural blebs and seen in young adolescent smoker male

2. Secondary Pneumothorax

Usually in patient with underlying lung pathology

Causes include: Pneumonia, Pulmonary infarction, Tuberculosis, Bronchopleural fistula, Lung Cancer

B. Traumatic

Iatrogenic(Following thoracic surgery or bypass) or chest wall injury

On the basis of physiology

1. Closed type: The communication between the airway and pleural cavity seals, so the trapped air is absorbed spontaneously

Ref: *Davidson's principle and practice of Medicine 23rd edition, Page no 625-627*

Answers

155.a	20 mmol/L	156.c	Glomerulone...	157.a	ASO titre
158.c	Hypertensiv...	159.b	Give 2ml/kg ...	160.d	Impaired ...
161.a	Xray	162.a	Cortical ...	163.a	Early met...
164.c	Bleomycin	165.a	osteomyelitis	166.b	Acute Iritis
167.a	Ankylosing ...	168.c	HLA B27	169.c	Inflammatory ...
170.c	Steroids	171.a	Raised JVP	172.a	Increased ve...
173.a	Diabetes	174.b	EF ⇐ 40%	175.b	Decreased renin
176.c	Rapidly ...	177.c	Needle pun...	178.a	Tube thorac...
179.b	Safety tria...	180.a	Rupture of subpleural blebs		